

Straight Through Blow Down Valve with Pneumatic Actuator

Fig. 35.415

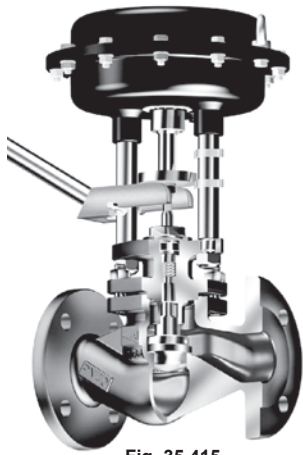
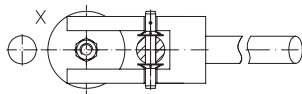
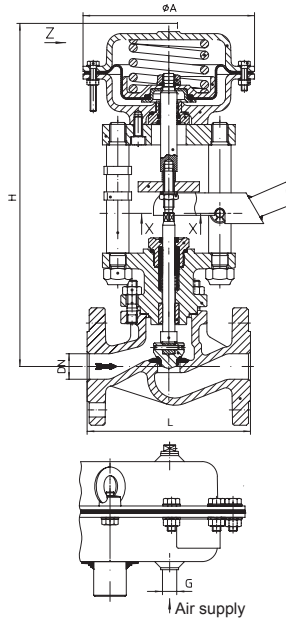


Fig. 35.415



ARI-STEVI BBD is a Rapid-Action Intermittent Bottom Blowdown valve. It is operated to give a few-second blast which removes sludge at the bottom of the boiler to increase boiler efficiency and maintains optimum steam quality.

ARI-STEVI BBD is special designed in one single unit for both
 - Manual operated blowdown valve with hand lever and/or
 - Automatic blowdown valve with pneumatic actuator

Dimensions					
DN		25	32	40	50
Seat - Ø	mm	22	27	37	47
Kvs values		6.4	6.4	14.7	14.7
Travel	mm	8	7	10	13
H	mm	336	336	364	370
ØA	mm	168	168	250	250
G	inch	1/4	1/4	1/4	1/4
Lever	mm	500	500	500	500
L	mm	160	180	200	230
Weight	kg	13	15	18.3	21.5

Face to face dimension FTF series 1 according to DIN EN 558-1 (DIN 3202-1 series F1)

Technical Data				
Type	Blow Down Valve Fig. 415		Plug design	Standard : Isolation plug with marginal seat, stellite
Nominal diameter	DN 25-50		Shut off classes	Metal seat - Leakage class 1 acc. to DIN 3230 T3/BN
Nominal pressure	PN 40		Auxiliary energy	Air supply pressure max : 6 bar Air supply acc. to DIN IEC 60654-2
Stem sealing	PTFE-V-ring unit	-10 °C up to 220 °C	Selection of possible applications	Steam boiler plants (for bottom blow down) - other applications on request
	PTFE-packing	-10 °C up to 250 °C		
	Pure graphite-packing	-10 °C up to 450 °C		
Body material	1.0619+N PN40 Fig. 35.415 Other materials and versions on request			

Pressure Temperature Ratings											
acc. to manufacturers standard											
Material			-10°C to +50°C	120°C	150°C	200°C	250°C	300°C	350°C	400°C	450°C
1.0619+N	PN40	(bar)	40	40	38.1	35	32	28	25.7	23.8	13.1

Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.

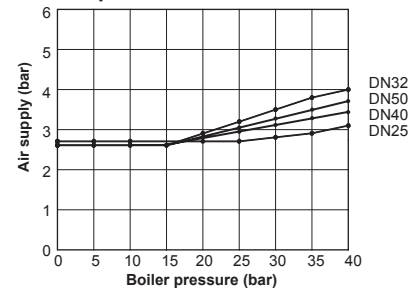
Calculation of boiler water quantity to be discharged according to formula:

Conductivity of feedwater : **S = 20** [µS/cm]
 Admissible conductivity of boiler water : **K = 4000** [µS/cm]
 Boiler capacity : **Q = 2000** [kg/h]
 Boiler water quantity to be discharged: **A ≈ 10** [kg/h]

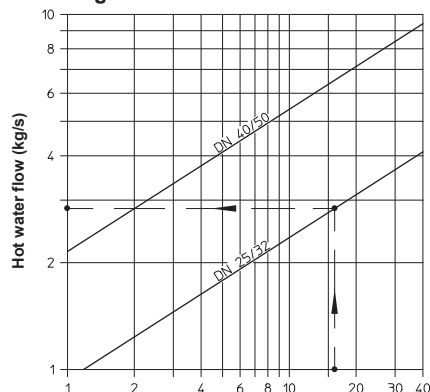
Steam boiler pressure (bar) Reading chart

Boiler pressure : 16 bar
 Nominal size of intermittent boiler blowdown : DN 32
 Flowrate : 2.9 kg/s
 Blowdown duration = $10/2.9 = 3.5$ s/h
 ≈ 4 seconds per hour

Control pressure

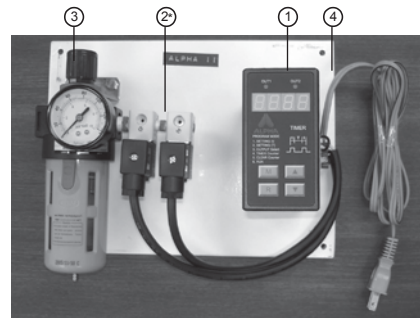


Flow diagram

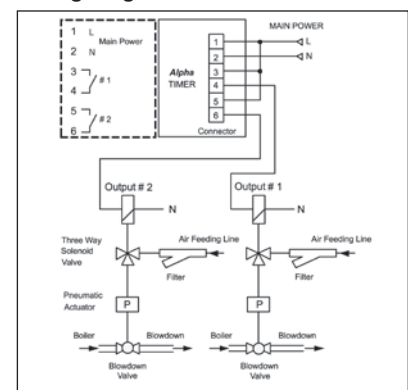


TIMER Complete Set

1. Timer Alpha
 2. 3/2 Solenoid Valve
 3. Air Filter Regulator
 4. Steel Plate
- (*one Solenoid Valve used for one Blowdown Valve)



Wiring Diagram



*last updated 10/16