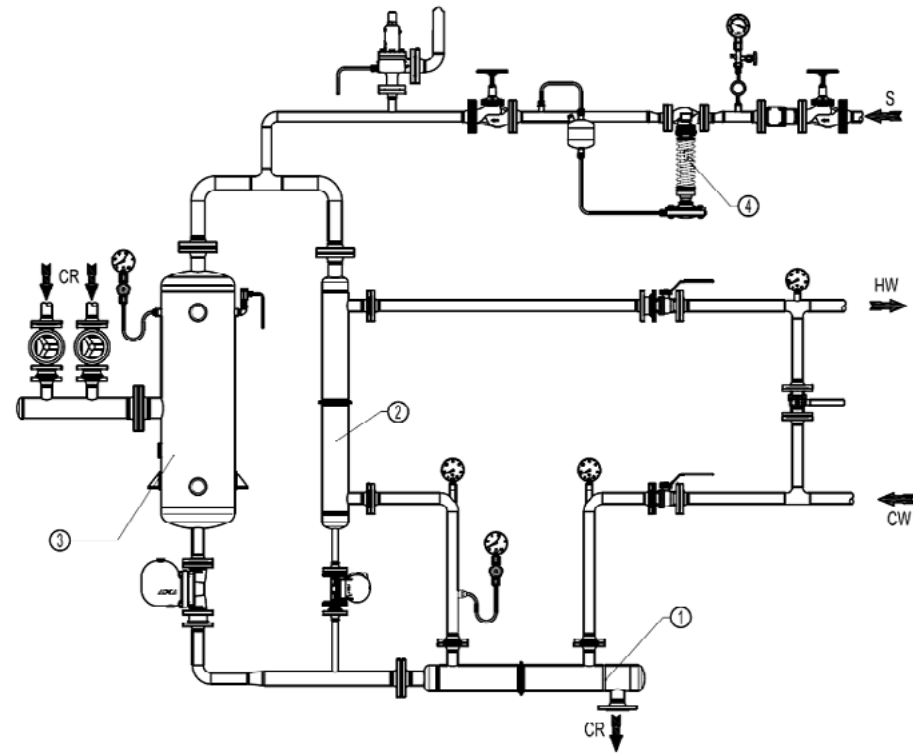
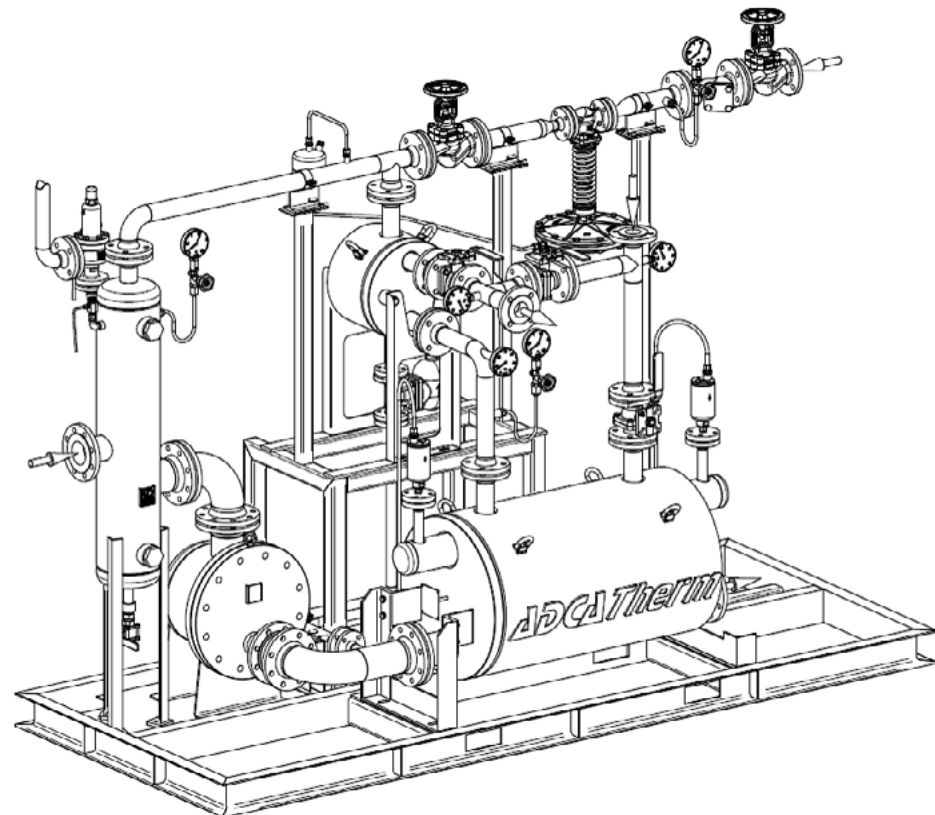


TYPICAL INSTALLATION



The condensate return (CR) is expanded on a flash vessel (3). The flash steam which is produced there and the remaining condensate are then directed to the respective heat exchangers (1 e 2) where, in the meanwhile, the pressurized feed water (CW) is heated (HW) before it passes to the economizer or is directly introduced in the steam boiler (it is recommended to install a by-pass from CW to HW). The final condensate will then be recovered to the condensate tank, not being at this stage sufficiently hot to cause the feed water overheating. A pressure reducing station (4) may be considered to ensure the thermal stability of the system.



**BLOWDOWN EXPANSION AND COOLING UNITS
BEX**

DESCRIPTION

The ADCA BEX series blowdown expansion and cooling units are used in modern boiler houses to cool hot waste water and steam boiler blowdown before discharging them into a pit or drain.

OPERATION

The waste water is discharged into the unit, which is at atmospheric pressure, and the cooling water enters through a control valve controlled by a thermostat, mixing it with the hot water. If flash steam can not be recovered or discharged to atmosphere, an additional condensing water spray system can be supplied. It is fitted into the top of the unit and can be controlled directly, either by another thermostat, or by the same command used for the automatic blowdown valve control.

MAIN FEATURES

- Prevents thermal pollution.
- Overflow with siphon breaker.
- Easy to install.
- Reduces the flow of flash steam.

OPTIONS:

- Stainless steel construction.
- Flash steam condensing spray system.
- Complete system including all the necessary equipment (stop and check valves, thermostats, exhaust head, etc).
- Manifold with several inlets for multi-boiler installations.
- Manhole or handhole for inspection.
- Fitted with support brackets for elevated installation.

USE:

Boiler blowdown and hot waste water.

AVAILABLE MODELS:

BEX15, 30, 40, 50, 60 and 80 – carbon steel.

CONNECTIONS:

- Female threaded ISO 7 Rp or NPT.
- Flanged EN 1092-1 PN 16.
- Flanged ASME B16.5 Class 150.

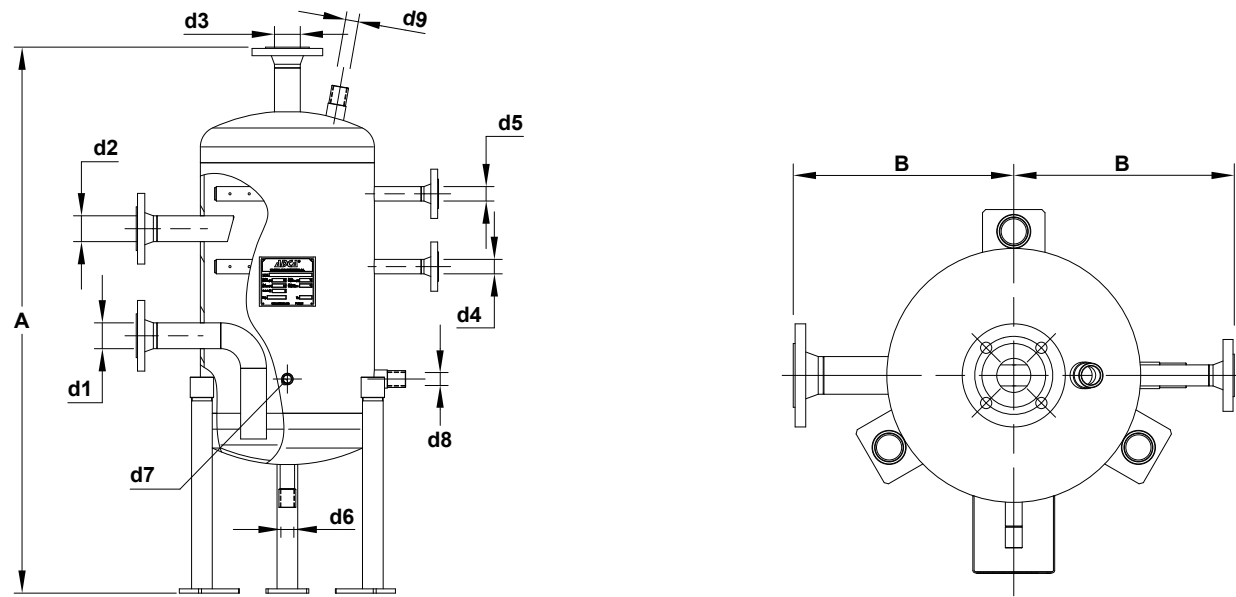
INSTALLATION:

Vertical installation.
The inlet of the blowdown tank is always higher than the boiler discharge valves. Therefore, the connecting pipe should have provisions made at a low point to drain the boiler.
See IMI – Installation and maintenance instructions.



LIMITING CONDITIONS

PS – Maximum allowable pressure	0,5 bar
TS – Maximum allowable temperature	120 °C
Minimum operating temperature: -10 °C. Design code: AD-Merkblatt. Other conditions on request.	



DIMENSIONS (mm) *														
MODEL	A	B	d1	d2	d3	d4	d5 **	d6	d7	d8	d9 **	VOL. (L)	STW. (L) ***	WGT. (kg)
BEX15	1150	255	DN 25	DN 40	DN 40	DN 15	DN 15	1"	1/2"	1"	1"	22,9	9	41
BEX30	1245	312	DN 40	DN 40	DN 40	DN 25	DN 25	1"	1/2"	1"	1"	56,9	18	71
BEX40	1275	353	DN 50	DN 50	DN 50	DN 25	DN 25	1"	1/2"	1"	1"	92	29	102
BEX50	1430	455	DN 80	DN 50	DN 80	DN 25	DN 25	1"	1/2"	1"	1"	251	71	135
BEX60	1930	455	DN 100	DN 65	DN 100	DN 25	DN 25	1"	1/2"	1"	1"	393	125	189
BEX80	2350	530	DN 150	DN 100	DN 150	DN 40	DN 40	1 1/2"	1/2"	1"	1"	767	233	364

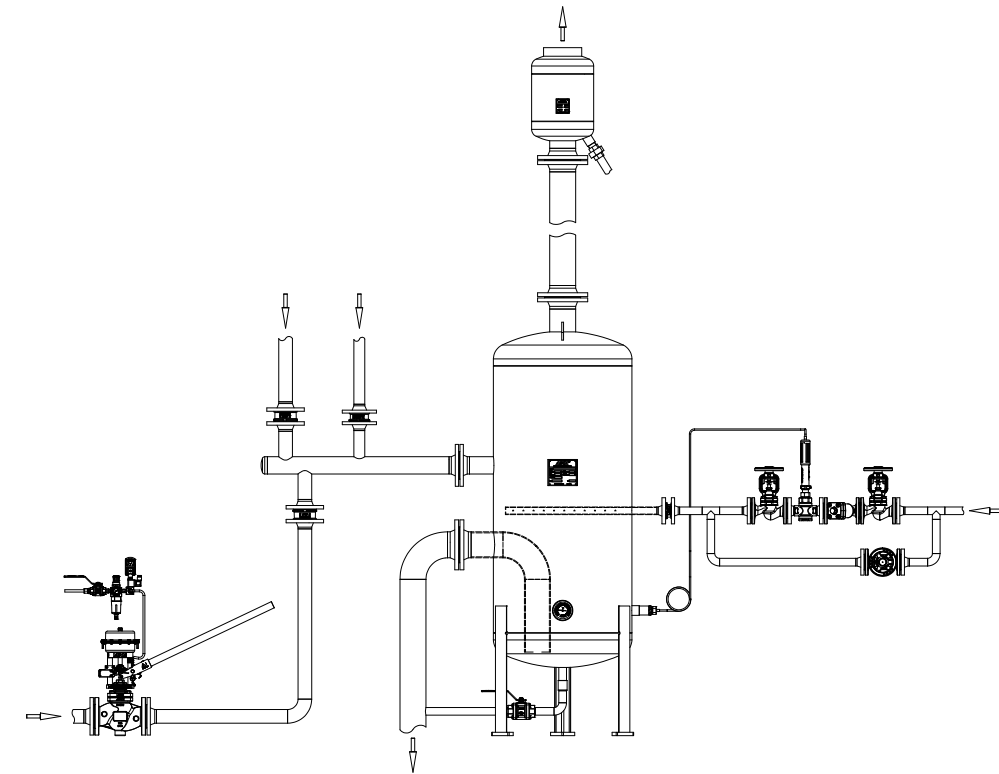
* Indicative values. Final dimensions, weight and connections to be defined according to requirements.
 ** Optional.
 *** Standing water.

SELECTION TABLE						
MODEL	BEX15	BEX30	BEX40	BEX50	BEX60	BEX80
HOT WATER FLOW RATE (kg/h)	150	300	600	1500	3000	5000

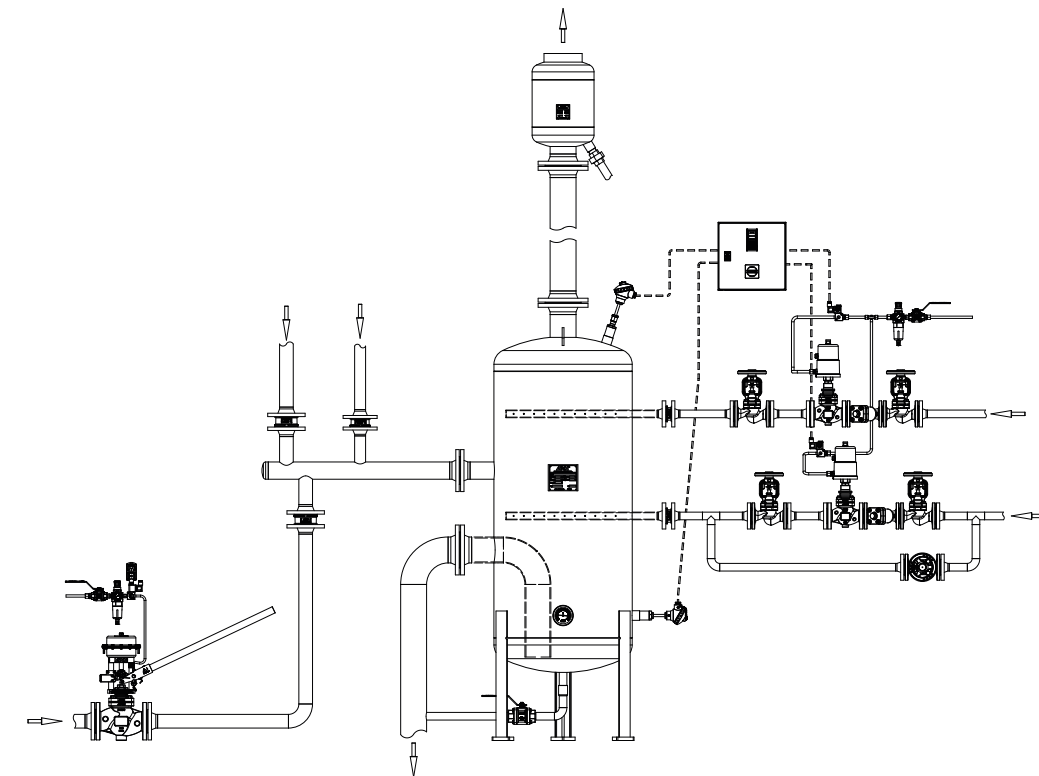
CONNECTIONS	
POS. N°	DESIGNATION
d1	Drain outlet
d2	Blowdown inlet
d3	Venting outlet
d4	Cooling water inlet
d5	Flash steam cooling water (optional)
d6	Drain
d7	Thermometer connection
d8	Thermostat/Temperature sensor connection
d9	Thermostat/Temperature sensor connection

TYPICAL INSTALLATION

WATER COOLING WITH ADCATROL TR SERIES SELF ACTING TEMPERATURE REGULATOR



WATER COOLING AND FLASH STEAM CONDENSING WITH ADCATROL ON/OFF PNEUMATIC CONTROL VALVES



Remark: Lists of all equipments associated with each of the above installation examples can be found in assembly drawings (AD) available on request.

**BLOWDOWN EXPANSION VESSELS
BV**

DESCRIPTION

The ADCA BV series blowdown vessels are used in modern boiler houses to cool hot waste water and steam boiler blowdown before discharging them into a pit or drain.
If flash steam can not be recovered or discharged to the atmosphere, an optional condensing water spray system can be supplied. It is fitted into the top of the unit and can be controlled by a thermostat.

MAIN FEATURES

Prevents thermal pollution.
Overflow with siphon breaker.
Easy to install.

OPTIONS:

- Water injection cooling system.
- Stainless steel construction.
- Complete system including all the necessary equipment (stop and check valves, thermostats, exhaust head, etc).
- Manifold with several inlets for multi-boiler installations.
- Manhole or handhole for inspection.

USE: Boiler blowdown and hot waste water.

AVAILABLE MODELS: BV3, 4, 5, 6 and 7 – carbon steel.

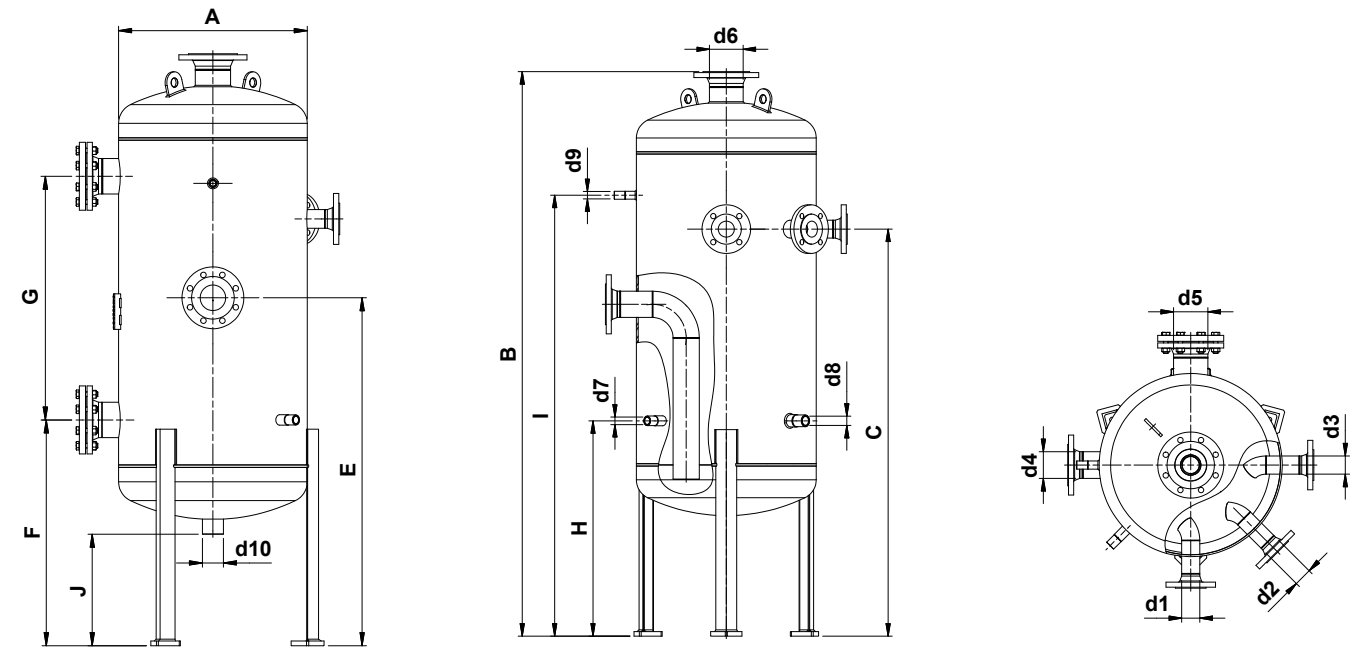
CONNECTIONS: Flanged EN 1092-1 PN 16.
Flanged ASME B16.5 Class 150.

INSTALLATION: Vertical installation.
The inlet of the blowdown tank is always higher than the boiler blowdown valves. Therefore, the connecting pipe should have provisions made at a low point to drain the boiler.
See IMI – Installation and maintenance instructions.



CE MARKING – GROUP 2 (PED – European Directive)	
Model	Category
BV3 and BV4	3 (CE marked)
BV5 to BV7	4 (CE marked)

LIMITING CONDITIONS	
PMA – Max. allowable pressure	7 bar
TMA – Max. allowable temperature	180 °C
Minimum operating temperature: 20 °C. Design code: AD-Merkblatt. Other conditions on request.	



DIMENSIONS (mm) *												
MODEL	A	B	C	E	F	G	H	I	J	STW. (L) **	VOLUME (L)	WEIGHT (kg)
BV3	508	1845	1345	1080	701	795	700	1430	357	114	249	176
BV4	610	1914	1380	1125	730	788	730	1495	361	175	373	210
BV5	762	1995	1415	1165	761	810	760	1540	357	284	598	322
BV6	914	2115	1470	1220	785	841	785	1565	304	473	978	447
BV7	1220	2254	1544	1294	819	885	839	1664	319	856	1812	865

* Indicative values. Final dimensions, weight and connections to be defined according to the supplied drawing.
** Standing water.

CONNECTION SIZES										
MODEL	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10
BV3	DN 50	DN 50	DN 50	DN 80	DN 100	DN 100	3/4"	1"	1/2"	2"
BV4	DN 50	DN 50	DN 50	DN 80	DN 100	DN 100	3/4"	1"	1/2"	2"
BV5	DN 50	DN 50	DN 50	DN 100	DN 100	DN 150	3/4"	1"	1/2"	2"
BV6	DN 50	DN 50	DN 50	DN 100	DN 100	DN 150	3/4"	1"	1/2"	2"
BV7	DN 50	DN 50	DN 50	DN 150	DN 150	DN 200	3/4"	1"	1/2"	2"

CONNECTIONS		
POS. N°	DESIGNATION	RATING
d1	Blowdown inlet	PN 16
d2	Blowdown inlet	PN 16
d3	Blowdown inlet	PN 16
d4	Blowdown outlet	PN 16
d5	Handhole	PN 16
d6	Venting outlet	PN 16
d7	Cooling water inlet	PN 16
d8	Thermostat connection	PN 16
d9	Pressure gauge connection	PN 16
d10	Drain	PN 16