WATER SUPPLY MODULE

HIGHLIGHTS

ENERGY EFFICIENCY
- Total use of condensate energy
- Re-use of low-level steam energy for feed-water pre-heating
- Short exterior pipes

REDUCED CONSUMPTION OF DOSING CHEMICALS
- By higher feed water temperatures
- By partial degassing on pre-heating plates

COMPACT, ROBUST DESIGN
- Only corrosion-free materials
- Integration of all components below the feed-water tank
- All connections below or on one side

DESIGN
- Feed-water condensate tank with fresh water pre-heating plates, level regulation, temperature sensor, cleaning lid, water level indicator
- Condensate recirculation below water surface
- Outlets for water samples
- Softening plant
- Dosing pump
- Integrated blow-down vessel (optional)
- Pre-heating device with steam (optional)

The integration of all the modules necessary for water purification results in a compact, rugged design (with a small footprint). For ease of installation and operation all access points are reachable from below or from one side. This facilitates installation, even in small rooms with low ceilings.

WHY WATER TREATMENT?
The correct pre-treatment of water is an essential element to achieve safe, failure-free and economic boiler operation as well as the optimal quality of steam.

The water supply unit reduces sedimentation, oxygen, carbonic acid and salinity in the boiler water and increases the PH-value.

The water treatment includes the softening of water, the adding of oxygen binding chemicals as well as the preheating of water.

Jumag Dampferzeuger GmbH
Schulze-Delitzsch-Str. 8
D-68542 Heddesheim

Phone +49 (0) 6203 - 955086-0
Fax +49 (0) 6203 - 955086-15
E-Mail jumag@jumag.eu

www.jumag.eu

jumag
DAMPFERZEUGER

WATER SUPPLY MODULE

TECHNICAL DATA

1. **NO CONNECTIONS ON TOP**
2. **FRESH WATER – PRE-HEATING PLATES**
3. **CONDENSATE RETURN UNDER THE WATER SURFACE**
4. **SHORT PIPES OUTSIDE THE TANK AND GOOD INSULATION**
5. **ALL COMPONENTS FIT UNDER THE VESSEL**

TECHNICAL DATA

	SWG 220	**SWG** 330	**SWG** 570	**SWG** 860
Hight	2295 mm	2295 mm	2295 mm	2295 mm
Width	1150 mm	1650 mm	1150 mm	1650 mm
Depth	650 mm	650 mm	950 mm	950 mm
Volume	220 l	330 l	570 l	860 l
Condensate return	2"	2"	2 ½"	2 ½"
Ventilation pipe	1 ½"	2 ½"	2 ½"	2 ½"
Outlet to the boiler	2"	2"	2 ½"	2 ½"
Overflow	2"	2"	2"	2"
Steam pipe	½"	½"	½"	½"

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BLOW-DOWN TANK

WITH OR WITHOUT ENERGY RECOVERY

HIGHLIGHTS

- **ENERGY RECOVERY**
  by pre-heating of fresh feed water
  (up to 4 kW at single-steam units)
- **NO FRESH WATER CONSUMTION**
  for cooling
- **LOW SEWAGE TEMPERATURE**
  without formation of steam

DESIGN

The blow-down and continuous bleed away of initial condensate occurs into a half filled water tank. In an integrated heat exchanger the energy of the blown-down water and the initial condensate will be transferred to fresh feedwater. If the water in the tank exceeds a defined temperature, the water is retained. The blow-down tank without energy recovery has no hot water retainment and no heat exchanger.

WHY BLOWING DOWN?

With the evaporation of water, substances like salts or minerals are left behind in the boiler water, which doesn't vapourise into steam.

Thus the boiler water in the evaporation system continuously becomes enriched. This enriched boiler water must be blown down regularly in order to avoid corrosion and sedimentation in the steam system.

Initial condensate that is carried along with steam boiler water is filtered out at the first steam separator.

FUNCTION OF THE BLOW DOWN TANK / DECOMPRESSION TANK

Blow-down water and initial condensate is under pressure and is at high temperature. In the blow-down tank it is decompressed and cooled down before being led into the wastewater system.

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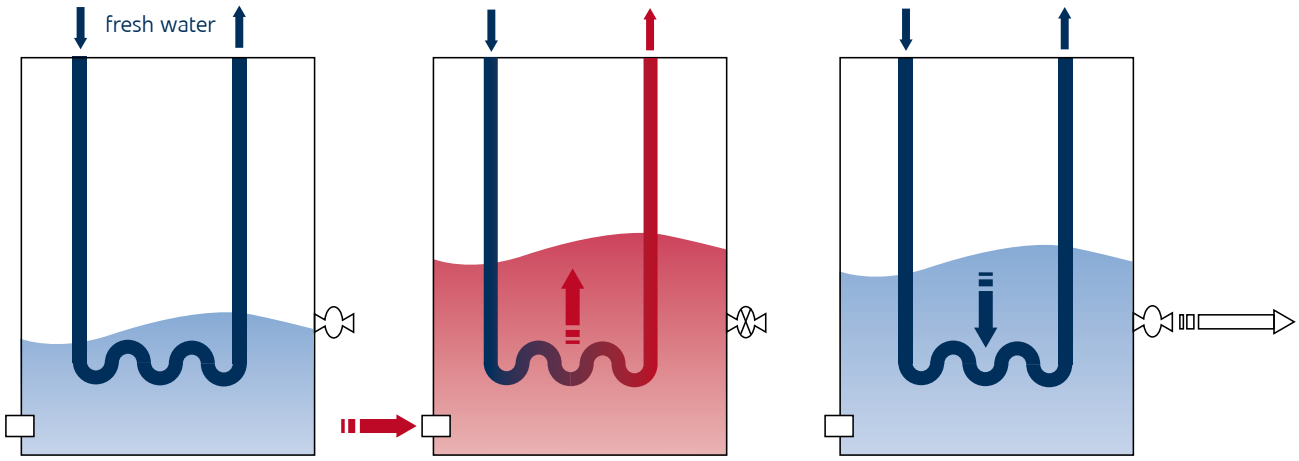
www.jumag.eu

BLOW-DOWN TANK

WITH OUR WITHOUT ENERGY RECOVERY

CONSTRUCTION OF THE BLOW-DOWN TANK



INITIAL POSITION:

- Water outlet is cold
- Valve is open

DURING BLOW-DOWN:

- Water outlet gets hot
- Valve closes
- Water level rises

➔ **Feed water gets warmed up and cools down the water outlet**

AFTER COOLING DOWN:

- Water outlet is cold
- Valve opens

➔ **Water drops to initial level**

TECHNICAL DATA

Blow-down tank	
Width	500 mm
Depth	650 mm
Hight	1100 mm
Volumen	150 l
Mating dimensons blow down supply	1“
Breather pipe	2“
Fresh-water connection	½“
Drain	1“

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