

BAROMETRIC CONDENSER

SERIES - E3100

Barometric condensers are utilized to de-superheat and condense the incoming vapors plus cool the existing gases, while developing the lowest possible pressure. This is basically a direct contact jet condenser.

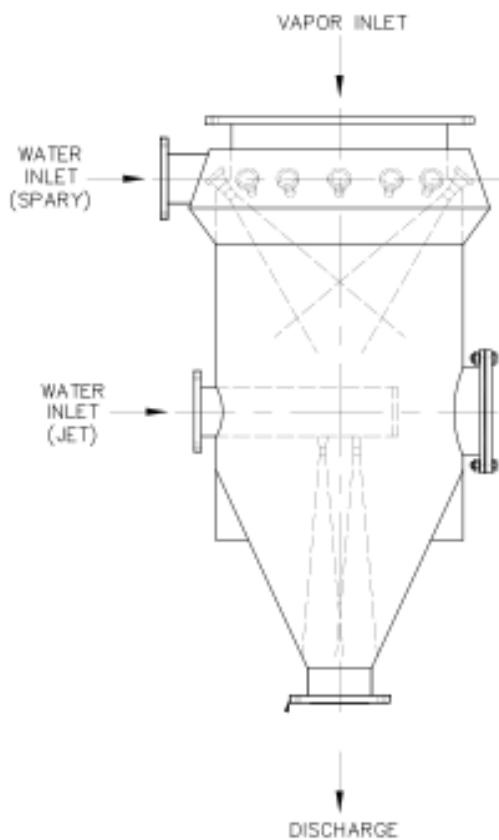


Fig 1:
Barometric Condenser without ejector
(i.e. The non-condensable gases are negligible)

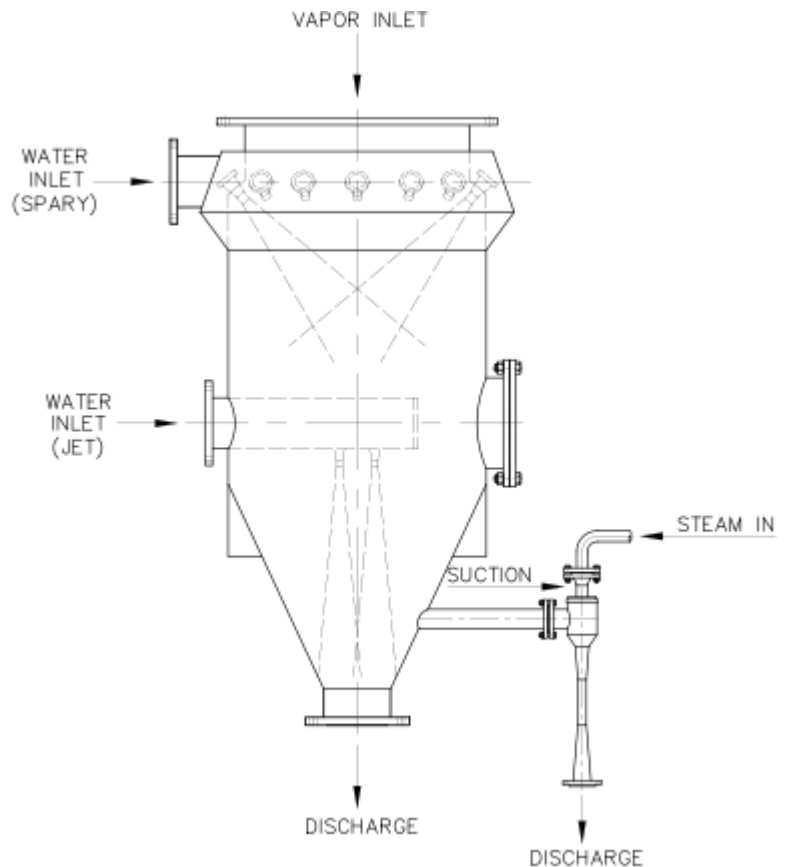


Fig 2:
Barometric Condenser with ejector
(i.e. The non-condensable gases are present in incoming steam)



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CONSTRUCTION:

Barometric condensers consist of a body, water nozzle such as spray type nozzle and jet type nozzle which are threaded into the body. Water enters through the two inlets, leaving from the lower nozzle in the form of converging jet streams and from the upper nozzle in the form of converging sprays.

If inlet vapor contains non-condensable gases, the ejector has to be installed near the condenser. This ejector is used to entrain the non-condensable gases from condenser by creating vacuum.

OPERATION:

Vapors entering the condenser at the top are condensed by water from the nozzles. The condensates and water comes to the hot well through vertical tail pipe called as "Barometric leg" due to gravitational force. The Barometric leg allows the water and condensates to the exit no matter what the vacuum is in the process vessel. The non-condensable gases are withdrawn from the condenser by using a steam jet ejector.



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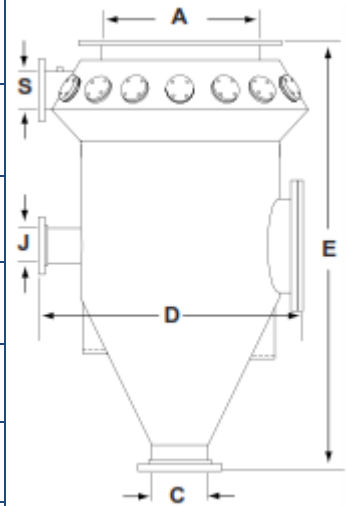
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SIZES, CAPACITIES, DIMENSIONS OF BAROMETRIC CONDENSER:

MODEL	MAXIMUM WATER CAPACITY (m ³ /hr)	CONNECTIONS (NB)				OVERALL DIMENSIONS (mm)	
		VAPOUR INLET (A)	WATER INLET		DIS-CHARGE (C)	(D)	(E)
			(S)	(J)			
BAC-E3120	140	500	125	125	150	875	1700
BAC-E3124A	170	600	125	125	150	1015	1880
BAC-E3124B	215	600	125	125	200	1015	1880
BAC-E3130A	250	750	150	150	200	1200	1925
BAC-E3130B	295	750	150	150	200	1200	1925
BAC-E3130C	385	750	200	150	250	1295	2095
BAC-E3136	500	900	200	200	250	1480	2390
BAC-E3142	725	1050	250	200	300	1625	2920
BAC-E3148	860	1200	250	200	300	1810	3200
BAC-E3154	1135	1350	300	300	350	2115	3405
BAC-E3160A	1360	1500	350	300	400	2300	3610
BAC-E3160B	1815	1500	350	300	450	2300	3610
BAC-E3166	2040	1650	400	350	500	2795	4065
BAC-E3172	2720	1800	450	400	600	3050	4575



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APPLICATION:

- Processing edible oil, milk and other products in food industry
- Sugar refining
- Alcohol plants and distilleries
- Pulp and paper mills
- Petroleum refineries
- Salt manufacturing plants

ADVANTAGES:

- Immunity from flooding, in the event of priming or liquid entrainment
- There are no moving parts, low maintenance
- Requires little space and is readily installed
- Lower installation cost
- Open barometric discharge provides safe operation without an atmospheric relief valve
- Economical on water consumption



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