

Exhaust Vapour Condenser

High efficiency energy saving solution



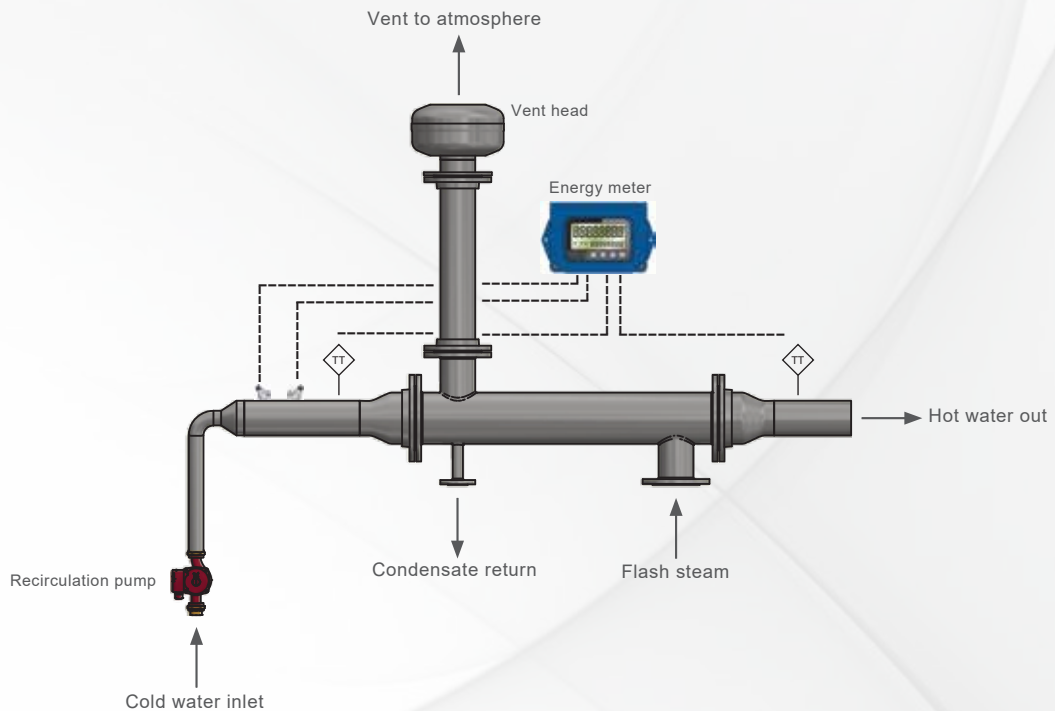
First for Steam Solutions

EXPERTISE | SOLUTIONS | SUSTAINABILITY

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Exhaust Vapour Condenser Solution

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The Spirax Sarco Exhaust Vapour Condenser Solution (EVCS) is a reliable, innovative solution for recovering waste heat that would otherwise be lost to the atmosphere, to assist in reducing energy and water consumption.

EVC heat exchangers are compact and designed for the condensing of flash steam, delivering an economic efficient solution for heat transfer in any industry. The unique straight corrugated tube design encourages turbulent flow, resulting in high efficiency heat transfer, improving the efficiency of your steam system, whilst reducing your carbon emissions to help you cut your energy bill.

Features	Benefits
Environmentally friendly	<ul style="list-style-type: none"> • Reduces steam generation costs, utility bills and CO₂ emissions. • Increases boiler efficiency and reduces boiler blowdown. • Reduces or completely removes flash steam.
Low cost of ownership	<ul style="list-style-type: none"> • Significant savings of fuel, water and feedwater chemicals providing a rapid return on investment. • High quality components reducing maintenance costs.
Energy Management	<ul style="list-style-type: none"> • Quantifies and displays energy savings

Typical application 1: Flash steam recovery from condensate receivers

Reducing your steam generation costs

With today's energy pricing and the need to reduce emissions, a plant's steam and condensate system cannot afford to vent flash steam to the atmosphere. A typical system will incorporate a condensate receiver that allows the flash steam to vent to the atmosphere.

Non pressurised condensate receivers often vent flash steam to atmosphere, which is due to high temperature condensate being returned to a vessel, this can lead to partial pressurisation of the vessel and local boiling may occur which also evaporates more of the cooler condensate within the receiver.

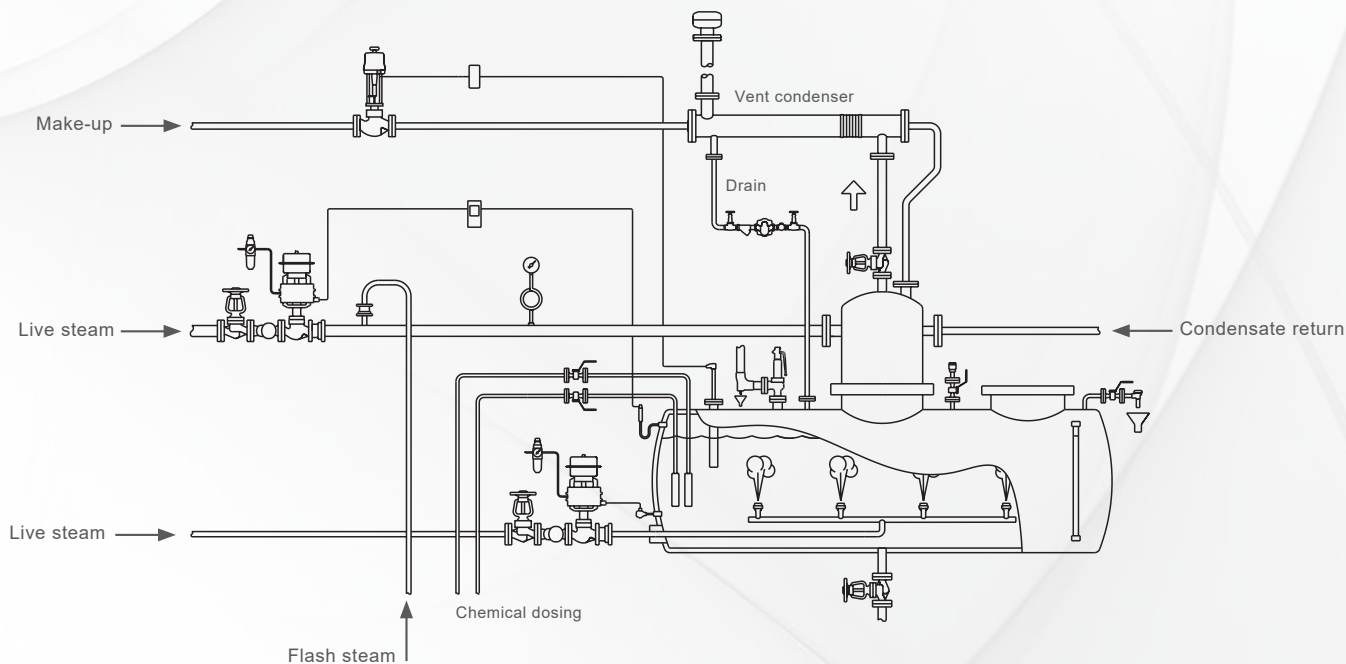
The venting of the flash steam ensures the condensate receiver is never pressurised, therefore to prevent these flash steam losses to the atmosphere, you can install an EVCS to recover the energy from the flash steam allowing you to:

- Use the energy to pre-heat a fluid for a process
- Reduce your carbon emissions
- Improve the efficiency of your steam system, so your boiler would have to produce less steam
- Reduce blowdown of the boiler
- Reduce water make up and chemical requirements

The Spirax Sarco EVCS package has proven to provide efficient payback within short periods of time, some applications within one year!



Typical application 2: Heat Recovery from Pressurised Deaerators



Oxygen is one of the primary causes of corrosion in steam systems. Pressurised deaerators are used to expel the maximum amount of oxygen possible by pressurising the feedwater before it goes into the boiler, using steam. Some of this steam is continually bled, and is valuable energy that can be recovered.

Available models:

Heat Exchanger	Steam massflow (kg/hr)	Heat load (kW)	Waterflow (kg/hr)
EVCS-40	30	19	804
EVCS-50	50	31	1,350
EVCS-80	75	47	2,020
EVCS-80	100	62	2,690
EVCS-100	200	125	5,370
EVCS-150	300	187	8,060
EVCS-200	500	312	13,400
EVCS-250	750	469	20,100

* Performance Sized with water from 50 to 70°C

** Sized with maximum inlet steam velocity 15m/s

*** EVCS package typically comprises of heat exchanger, inlet water circulation pump, energy meter and vent head however may require specific application review for suitability

This information is a guide only, Spirax technical assistance is recommended to be sought regarding final selection/configuration

For more information please contact us

SB-P576-001ANZ Issue 1

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