

Spirax Sarco FREME

Flash Recovery Energy Management Equipment



Spirax Sarco FREME is an innovative heat recovery system that delivers major energy savings by recovering waste heat from a condensate return system and using it to pre-heat boiler feed water. Heat and water previously lost can be effectively recovered, reducing utility bills, water treatment chemical costs and CO₂ emissions.

Using condensate returned from the steam distribution system to heat boiler feed water is an extremely effective energy saving measure. For every 6°C rise in boiler feed water, 1% is typically knocked off the boiler energy bill.

However, many steam systems fail to recover all the heat in returned condensate because:

- It would raise the feed tank temperature from the typical 85 to 90°C to above boiling point, causing cavitation that can damage boiler feed pumps.
- Up to half of the recoverable energy in condensate can be lost as flash steam when condensate leaves a pressurised steam system and returns to atmospheric pressure.

Such sites often vent flash steam from their boiler feed tank. As well as wasting energy, vented flash steam is a highly visible sign of environmentally unfriendly operations, which may damage your brand.

The Spirax Sarco FREME system solves all these issues by feeding virtually all the energy from the returned condensate into the high-pressure side of the boiler feed pumps. The higher pressure means the boiler feed water can be heated to well over 100°C without boiling and causing pump cavitation.

With Spirax Sarco FREME, nearly all your plant's condensate and flash steam can be returned and the energy recovered.

Why invest in a flash steam heat recovery system?

- Water, fuel and feedwater chemical costs are reduced – for example a 6°C rise in feedwater temperature equals a 1% fuel saving.
- Wasteful and unsightly plume of steam is eliminated, meaning you are seen as more environmentally aware.
- No more pump cavitation or feedtank boiling problems - costs associated with unnecessary maintenance and replacing products are eliminated.
- Quick return on investment.
- A simple packaged solution that is easy to specify, install and commission.



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