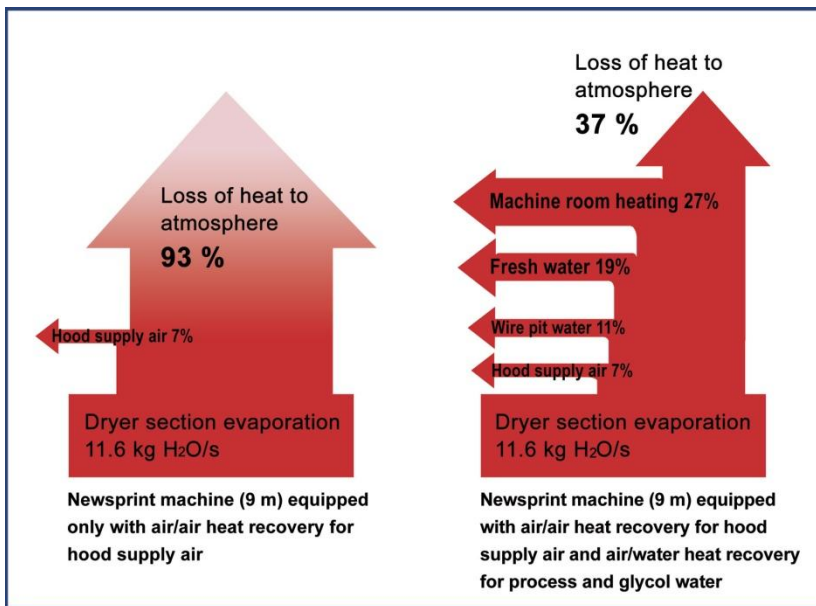
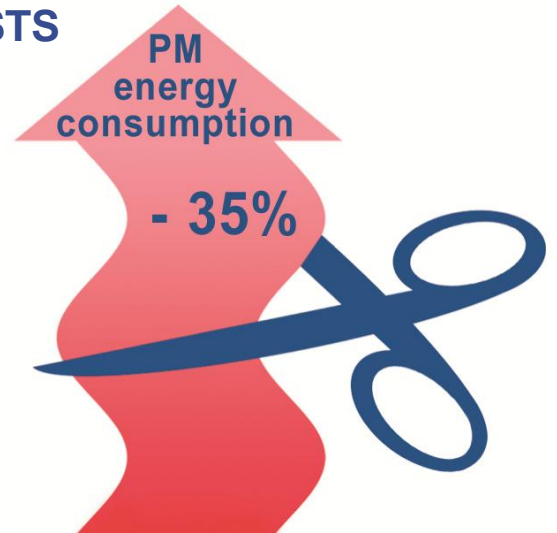


## EFFICIENT HEAT RECOVERY CUTS ENERGY COSTS

### SAVE OVER 35% OF PM ENERGY CONSUMPTION

Drying steam is the main energy consumer in paper machine. To cut energy costs, major part of the heating energy should be recovered.

Modern, efficient heat recovery may bring over 60% of the drying section heating energy back to the process. For the entire production line (/PM) this means over 35% energy savings.



Modern heat recovery brings over 60% of energy back to the process (Picture adapted from Markku Karlsson, Papermaking Part 2, Drying, 2000)

### MODERN HEAT RECOVERY ENSURES MAXIMAL ENERGY SAVINGS

For example, if the hood supply air is heated with only air-to-air heat exchangers, less than 10 % of energy is recovered back to the process. This means a huge potential of energy saving is wasted.

With both air-to-air and air-to-water heat exchangers, over 60% of energy can be recovered back to the process.

#### GENERAL RULE:

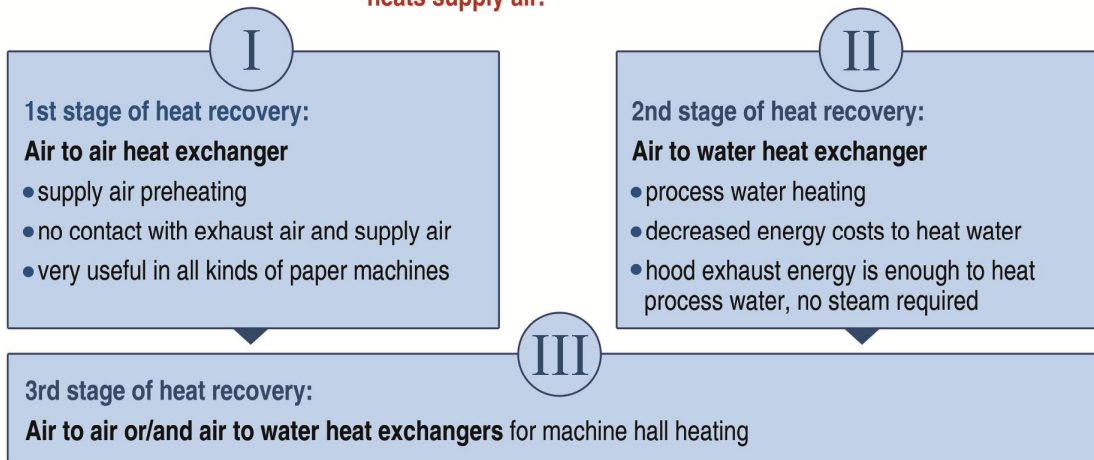
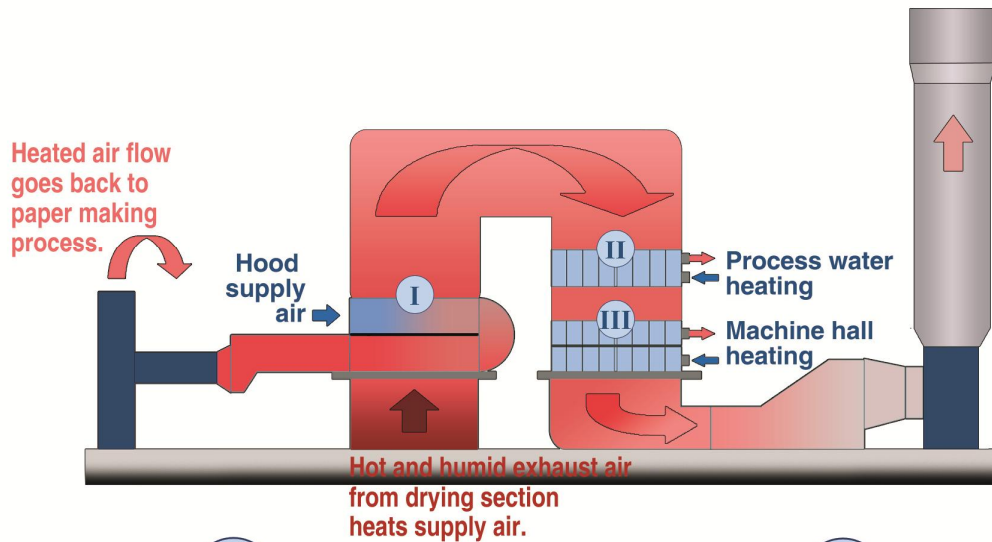
You need primary heating energy only for cylinder steam.

For all other heating purposes you receive energy from your heat recovery.

### HOW MUCH COULD YOUR PRODUCTION LINE SAVE? typical savings for a newsprint machine:

<p><b>Energy costs</b> (energy price 25 €/MWh):</p> <p>No heat recovery: total heat energy costs/year <u>11,9 MEUR</u></p> <p>With air/air and air/water heat recovery: total heat energy costs/year <u>7,62 MEUR</u></p>	<p><b>Savings with modern heat recovery:</b> <b>4,28 MEUR / year</b></p>
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## MODERN HEAT RECOVERY INCLUDES AIR/AIR AND AIR/WATER HEAT EXCHANGERS



*"I promise you EV Heat Recovery ensures your mill a cost-effective, reliable solution.*

*We have experience from hundreds of energy saving related surveys and projects. We are experts in positioning and planning the up-dates so that you receive the best possible results.*

*We know how to cut energy costs –in heat recovery and other process parts."*

Mr. Esa Virtanen, Managing Director