

ENVIDEST MVR FF (30-2500)

Vacuum distillation with downflow/ forced circulation and vapor compression



**condorchem
envitech**

HIGHLIGHTS

The ENVIDEST MVR FF (30-2500) is a state of the art falling film vacuum evaporator with liquid circulation by means of mechanical vapour compression.

The application of the falling film optimises heat exchange and achieves lower energy consumption. Vacuum is maintained around 700 mbar and evaporator temperature rises up to 90 °C.

THE EFFICIENT TREATMENT OF WASTE WATER

The feed pump continuously feeds the waste water from the sump of the evaporator to the top of the falling-film evaporator/condenser. From which a film of waste water flows down the tube walls and evaporates.

Within the tubes, the amount of steam increases continually, thus boosting the flow speed.

This turbulent flow provides optimal heat transfer and ensures the self-cleaning effect. Any waste water left flows back into the evaporator sump.

Entrained water droplets and aerosols are retained before the vacuum pump by a multi-stage centrifugal separator and flow back into the evaporator sump.

The vapour, compressed by the vacuum pump, condenses on the outside of the tubes, transferring heat to the evaporating waste water on the inside of the tubes.

The hot distillate is fed through the pre-heater/distillate cooler and again heat is transferred to the inflowing waste water.

MAIN CHARACTERISTICS

- Very well suited for foaming waste waters.
- Foam destruction due to high flow rate.
- High and constant flow rate prevents deposits in the tube bundle.
- Lower energy consumption due to closed heat circuit.
- Interior is divided into hot and cold zones; prolonging operating life.
- Effective automatic CIP provides high availability.
- Compactly constructed machine with optimum accessibility.
- Processing is carried out by the state-of-the-art PLC and has a high operating comfort.
- Optional with "Best Dest" technology for best quality of the distillate.
- Various materials available for delivery option.

MAIN APPLICATIONS

ENVIDEST MVR FF 30-2.500 series is particularly suitable for:

- Rinse and active baths from surface treatment.
- Emulsions (coolants and lubricants).
- Washing and cleaning waste waters.
- Waste water with release agents.
- Rinse water from crack detection systems.
- Penetrants.

TECHNICAL DATA

	Units	30	40	60	90	120	160
Feed Inlet	l/d	600	800	1.200	1.800	2.400	3.200
Nominal Capacity	l/h	30	40	60	90	120	160
Energy Consumption	W/l	80-90	80-90	75-85	75-85	65-75	65-75
Dimensions (LxPxH)	cm	179x92x218	179x92x218	179x92x218	179x92x218	216x128x232	216x128x232

		200	240	300	350	400	500	600
Feed Inlet	l/d	4.000	2.800	6.000	7.000	8.000	10.000	12.000
Nominal Capacity	l/h	200	240	300	350	400	500	600
Energy Consumption	W/l	60-70	60-70	55-65	55-65	55-65	40-50	40-50
Dimensions (LxPxH)	cm	216x128x232	234x154x249	234x154x249	234x154x249	234x154x249	334x210x275	334x210x275

	Units	800	1000	1200	1500	2000	2.500
Feed Inlet	l/d	16.000	20.000	24.000	30.000	40.000	50.000
Nominal Capacity	l/h	800	1.000	1.200	1.500	2.000	2.500
Energy Consumption	W/l	40-50	30-40	30-40	30-40	30-40	30-40
Dimensions (LxPxH)	cm	334x210x275	335x239x330	335x239x330	335x239x330	440x245x356	440x290x389

PROCESS DIAGRAM

