

ENGINEERING
YOUR SPRAY SOLUTION



NEW SERIES

Spillback Nozzles Series 290



**Fine atomization.
Without compressed air.**

- Even finer droplets for shortest evaporation distances
- Optimized design
- High flow rate turn-down ratio



Spray angle of the individual nozzles
90° as hollow cone



High turn-down ratio
of up to 12:1



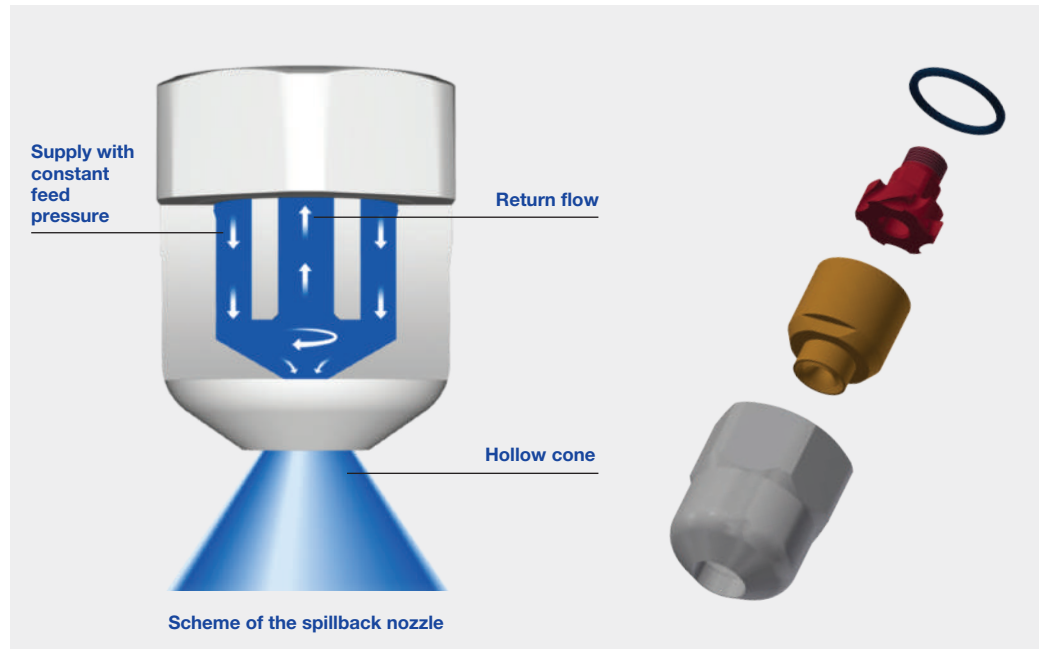
Low operating costs
as no atomizing air required



Even and fine liquid atomization
over the entire control range



Typical pressure range
of 35 bar, g in the supply line at the nozzle



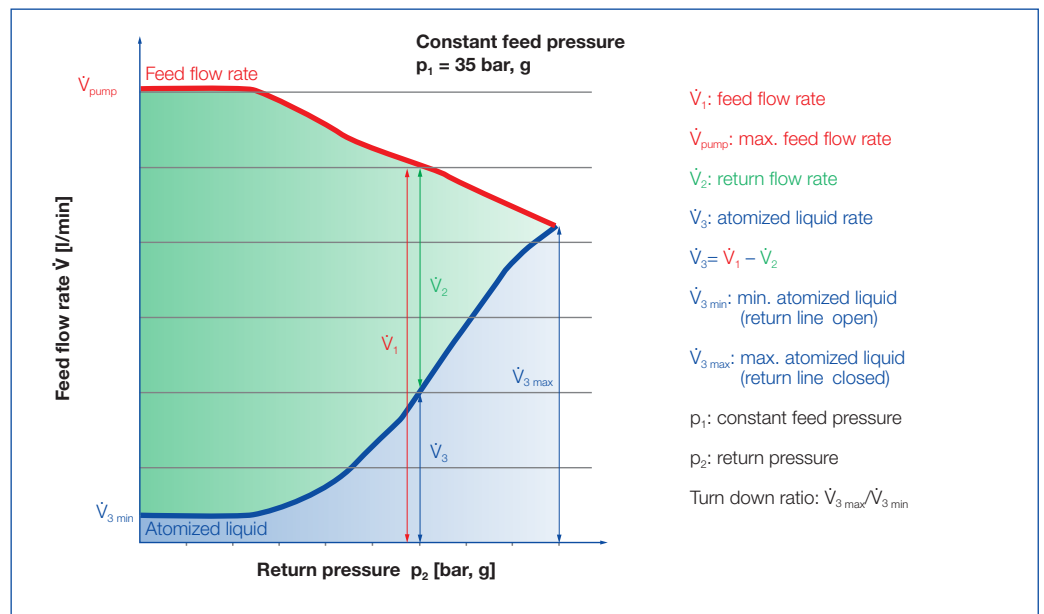
Scheme of the spillback nozzle

Lechler spillback nozzles atomize liquids as a fine hollow cone.

This special single-fluid nozzle works according to the pressure atomization principle.

The amount of atomized liquid is adjusted via a control valve in the return line of the valve skid unit, whereby part of the flow is taken from the feed flow rate and returned to the tank. The maximum atomized flow rate is achieved with the control valve closed.

Uniform and fine liquid atomization is achieved from minimum to maximum injection.



Advantages in design:

- Gas flow optimized housing
- Water flow optimized
- Low built-ups design
- Less single parts
- Mounting of nozzle with standard tools, no special tool necessary
- Simpler installation
- Nozzles are interchangeable on the lance



CASE STUDY

» Several design calculation for gas cooling towers have shown that an average reduction of 30% in evaporation distance is possible. With the revolutionary design of spillback nozzles 290 series, the significant smaller droplets can achieve up to 50% shorter evaporation distance.

» Due to optimized evaporation distance, the spillback system can be offered in way more process cases as an alternative to twin-fluid system. The spillback nozzles are now also suitable for smaller GCTs and as well as capacity upgrades.

» Our new generation of Spillback nozzles bring proven technology to a higher level.

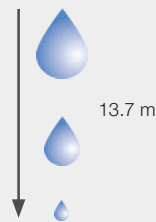


Inlet

Gas flow rate 110.000 Nm³/h
Temperature 370°C
Tower diameter 5 m

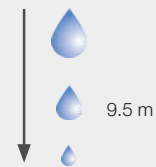
Evaporation distance with previous design of spillback nozzles

13.7 m



Evaporation distance with new design of spillback nozzles

9.5 m

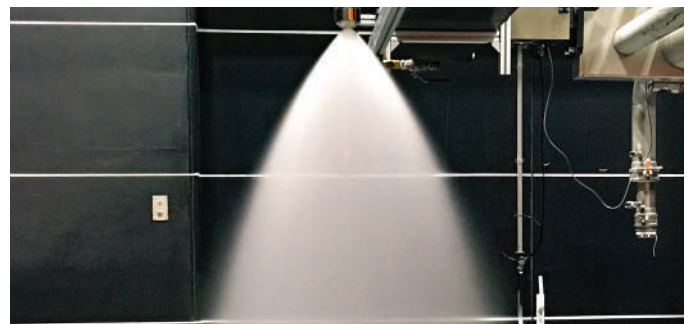
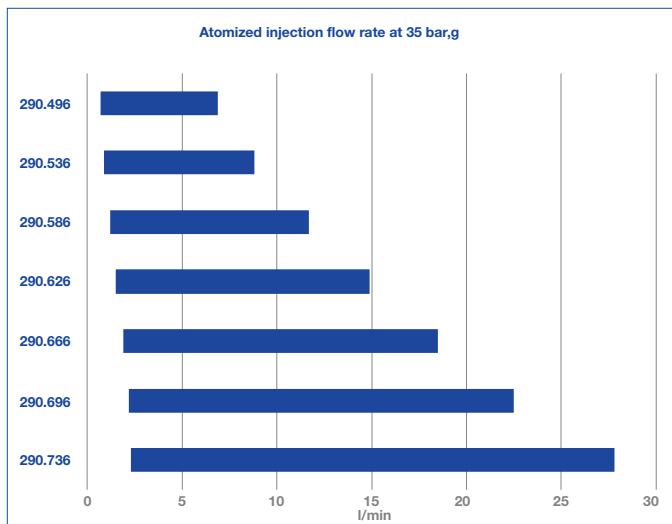


Outlet

Temperature 150°C

PROCESS GUARANTEE

We exactly know what our nozzles can do and can therefore offer our gas cooling systems with guarantees on your requested outlet temperature with complete evaporation.



Spillback line closed (max. injection), spray angle approx. 80 – 85°

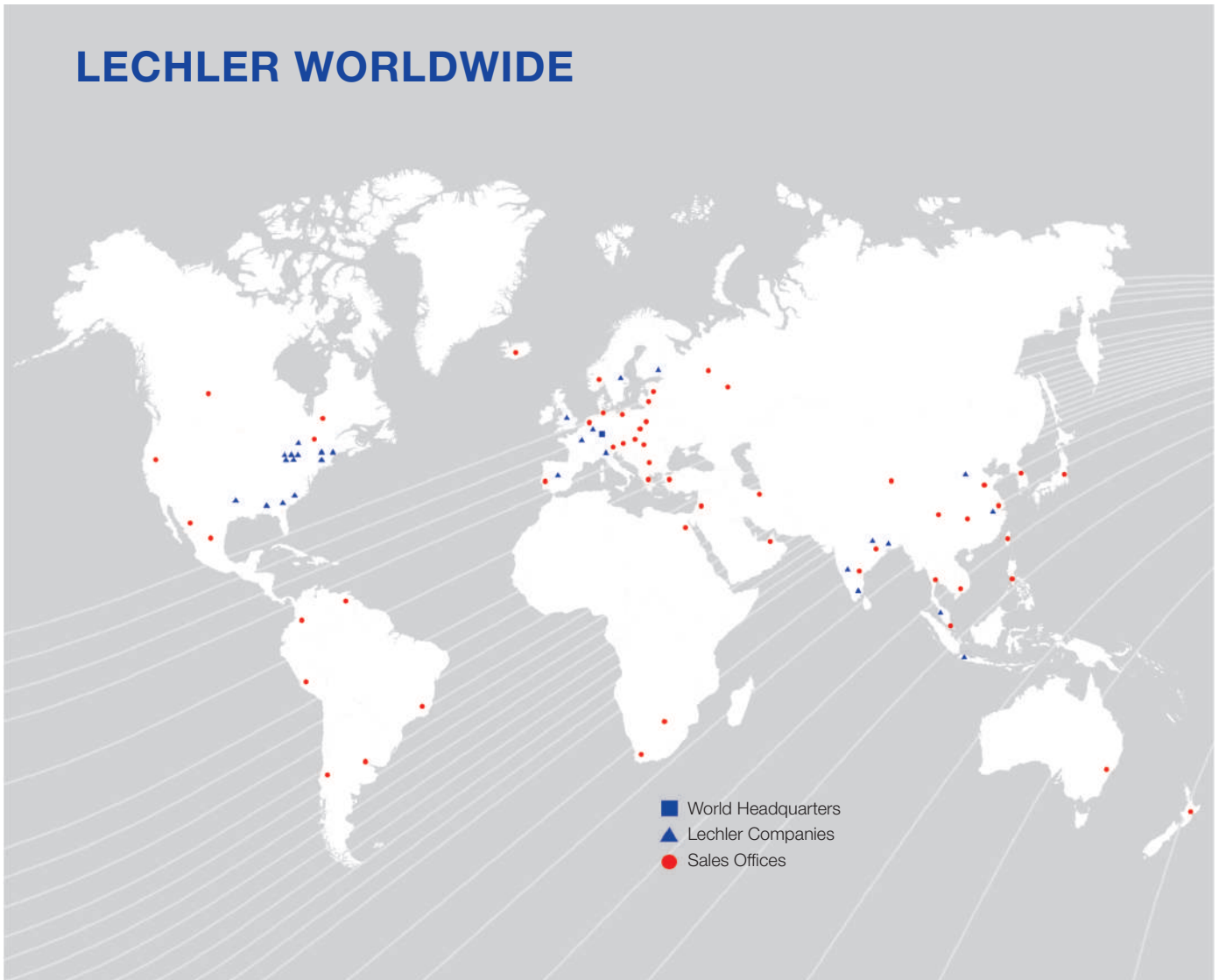


Spillback line open (min. injection), spray angle approx. 100°

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LECHLER WORLDWIDE



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