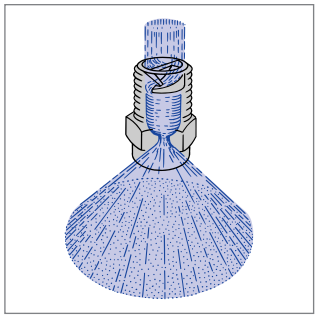
Full cone nozzles

Axial-flow full cone nozzles

Lechler full cone nozzles have an extraordinarily uniform liquid distribution over the whole circular impact area. The high precision of distribution is achieved by orienting the liquid inlet to the centre of the swirl chamber of the nozzle.
The optimized x-style swirl insert ensures a high operating safety due to its large free cross-sections.

Axial-flow full cone nozzles are available with different spray angles and in may flow rates. Therefore, matching to specific service conditions is possible without any difficulties.

- Extremely uniform liquid distribution
- Wide flow rate range
- Large number of available spray angles

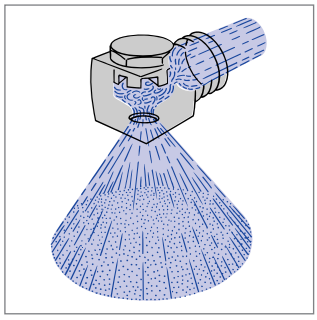


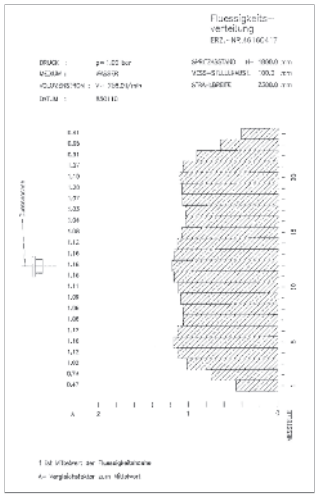
Special design for fire fighting:
Deflector-plate nozzle

Tangential flow full cone nozzles

Tangential-flow full cone nozzles are, for instance, particularly suited for closed-circuit spraying of liquids with a high quota of solid matter, or for fire fighting applications. The atomizing fluid is tangentially supplied to a swirl chamber, where it is put into rotation. Tangential-flow full cone nozzles are free of swirl inserts. Hence, they are not at all prone to clogging. The full cone spray is obtained with the aid of specially arranged grooves, milled into the nozzle bottom, which cause an adequate part of the rotating liquid flow to diverge to the center of the swirl chamber. Thereby, an extremely uniform area distribution of the sprayed liquid is achieved.

- Reliable in service
- Non-clogging
- Stable spray angles, unaffected by transient pressures



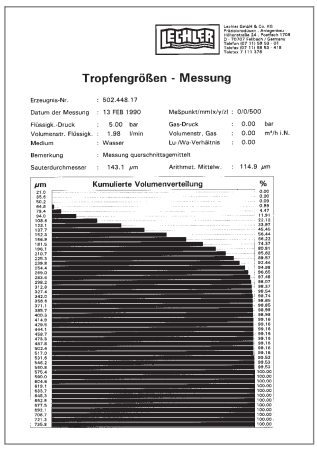


Typical liquid distribution chart

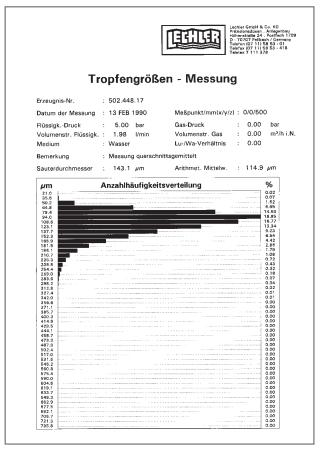
Cluster Head Nozzles

Lechler cluster head nozzles achieve a very large surface of the sprayed liquid by adding various finely atomizing single nozzles.
Whenever a fine fog-like full cone atomization with relatively large flow rates is necessary, e.g. gas exchange processes, steam cooling or dust suppression, Lechler cluster head nozzles have decisive advantages: overlapping hollow cones form a fine full cone atomization with an increased droplet surface area. These very fine droplets cannot be achieved by a single-orifice spray nozzle of the same flow rate size.

The increased droplet surface area of the atomized liquid provides great efficiency in gas treatment and cooling applications.



Cumulated volume distribution



Number distribution