

In general, you can operate every solid stream resp. flat fan nozzle with compressed air instead of liquid. Best results come from choosing the specific nozzle design.

Air nozzles are primarily used for:

Cleaning

Force of impact
has to increase
↓

- Loose dust
- Electrostatically charged dust (see ionisation devices)
- Dry shavings (metal - wood - plastic)
- Wet shavings (oil - emulsions)
- Touch-dry dirt
- Repair parts: oily, incrustrated, etc.

Drying

- Surfaces, blind holes, recesses

Cooling

- For your design, we require information on material, temperature (set/actual comparison), weight and form of parts, velocity, etc.

Transporting

and conveying

- Dust, powder, granulates, shavings resp. steam and polluted air

Recommended compressed air capacity

Pipe	Inside-Ø in mm	N/m³/h
1/4"	6.4	63
3/8"	9.5	105
1/2"	12.7	210
3/4"	19.1	462
1"	25.4	840
1 1/2"	38.1	1,890
2"	50.8	3,339

MC air nozzle types, functionality and spray patterns

After compressed air is extracted, the jet expands and decelerates with increasing distance due to an entrainment of ambient air.

All solid stream nozzles have the highest force of impact in isolated spots, however also the highest noise level.

If compared to solid stream nozzles, all **multi-channel and laminar air nozzles** have a reduced force of impact in isolated spots and a lower noise level at the same pressure consumption. Ambient air is stirred in the process.

Smooth or point-shaped jet: types D and LL

Full cone: for sheetlike impingement: types DK and DKQ

Flat fan nozzle: types DF - DZ - DL - LB - RID - DLV

Illu. 1



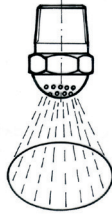
Type D
Solid stream

Illu. 2



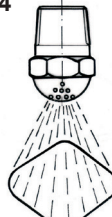
Type LL
(Multi-channel)

Illu. 3



Type DK
Conic
(multi-channel)

Illu. 4



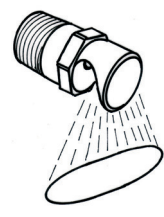
Type DKQ
Square
(multi-channel)

Illu. 5



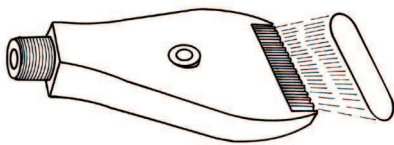
Type DF
Flat fan

Illu. 6



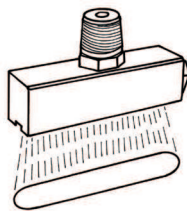
Type DZ
Deflected
flat fan

Illu. 6



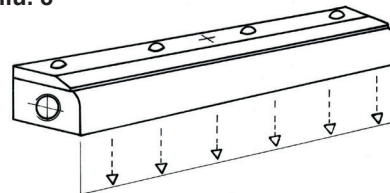
Type LB
Powerful flat fan
(multi-channel)

Illu. 7



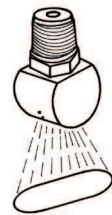
Type DL
Powerful
flat fan
(multi-channel)

Illu. 8



Type DLV
Air curtain
(laminar)

Illu. 9



Type RID
(Multi-channel)

MC provides **ionisation devices** and nozzles for a blowdown of electrostatically charged dust; with and without suction nozzles. **Consult us and we will provide an overall concept for you!**

Many air nozzles are also operated for industrial **steam cleaning**.

The saturated steam's high pressure and temperatures ligate oil and grease without cleaner additives, and rinses off dirt particles. Low water consumption reduces the amount of waste water which has to be purged.

Important information for economic and muted compressed air operations:

- Reduce air pressure.
- Reduce blowing distance to realize the same blowing force.
- Refrain, if possible, from blowing onto sharp edges and into holes. This causes high-frequency hissing sounds.
- Rather use several small nozzles instead of one large one. The noise level will be reduced.
- Only use compressed air if absolutely necessary. Adjust it with valves, cam switched, etc.