Mediumverteiler

The new way of milling

Ingenious? Simple? Simply ingenious!

The simplest ideas are often the best. This is definitely the case with the new medium distributor, which solves a multitude of practical chip-related milling problems. In conventional solutions, workpiece cooling and lubrication is a largely uncontrolled external process. The removal of chips from the workpiece also leaves a lot to be desired.

With the new medium distributor, on the other hand, the nozzle body ensures the complete and permanent absence of chips – and thus uniform cooling of the chuck, milling tool and workpiece.

This has not one but a whole host of benefits. Perhaps the most important is the fact that investing in a medium distributor normally pays for itself in just a few months. Long after the payback period, the medium distributor continues to cut costs and makes your production more competitive.

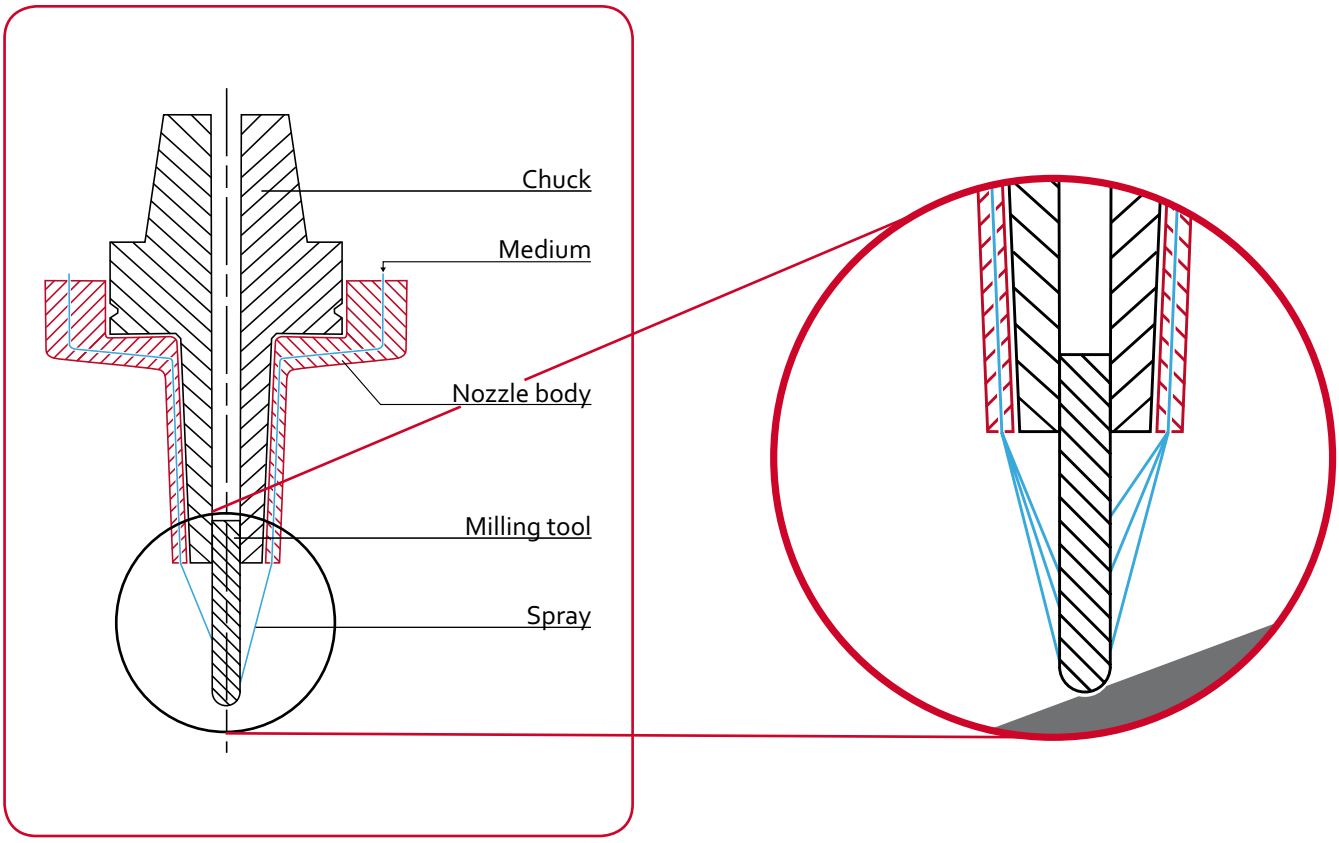
Key to the innovation

The key component of the medium distributor is the nozzle body.

When the tool is replaced, it is inserted in the spindle along with the tool holder (shrink-fit chuck, collet chuck).

The nozzle body itself remains stationary during the milling process.

The spray exits the nozzles under high pressure, forms an air blanket around the milling tool and always hits the exact point where the cutter comes into contact with the workpiece.



Milling without compromises

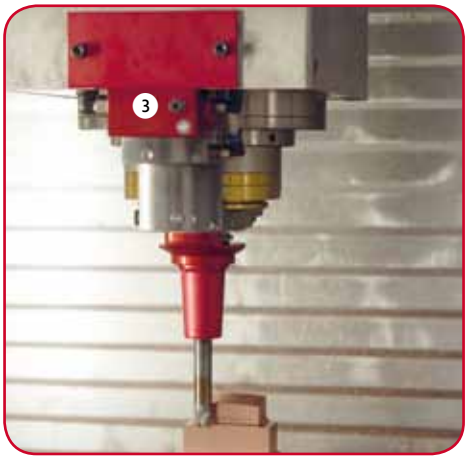
How the nozzle body's spray technology works

- Milling chips are always removed in their entirety, and with them the high level of thermal energy they contain.
- The tool chuck and milling tool remain at a permanently low temperature thanks to the air flowing through the nozzle body itself and the space between body and chuck (venturi principle).
- The milling tool is no longer damaged by passing over chips.

Why the medium distributor pays for itself so quickly

- Milling tools last far longer, thereby lowering your tool costs.
- The lower consumption of compressed air (approx. 30 standard liters per minute) reduces the amount of energy required by up to 80 percent. This cuts your energy costs, too.
- If you still need any emulsion at all for cooling and lubrication, the amount of oil required is reduced to a maximum of 2 grams per hour. This is good for the environment and your staff will be happy about their healthy working conditions, too.
- The amount of emulsion can be determined separately for each material. This improves quality significantly, achieving a surface quality comparable to that obtained with wet milling.
- No minimum quantity lubrication is required. Dry milling and drilling are almost always possible, making wet management a thing of the past.
- It is no longer necessary to readjust the spray hoses. This eliminates manual work and the process becomes faster.
- Milling deep ribs, grooves and contours is no longer a problem. Higher feed rates improve the milling performance significantly.
- Fast, cost-effective milling of a variety of workpieces is now possible. In many cases, costly and time-consuming EDM (Electrical Discharge Manufacturing) is no longer necessary.
- Unmanned operation is simpler, ensures greater process reliability and results in much lower labor costs.

Other components of the medium distributor



Air or a freely selectable emulsion is transported via the high-pressure pump ① from the emulsion container ② to the medium block.

Thanks to the new technology, emulsion is rarely needed. In the individual cases where it is, the mixture is created in the medium block and sprayed from the nozzle body to the point where the milling tool contacts the workpiece.

The control plate with medium block ③ is used to dock the nozzle body and secure it in place. It is attached to the spindle nose and has a connection to the medium block. Due to the different spindle dimensions, each spindle has a matching control plate – simply change a few parameters in the control system and enter the new commands in the CNC programs.

The medium distributor is available for all new machines and can, of course, also be retrofitted in existing machines. The technology has been developed for milling machines with HSK25, HSK32, HSK40, HSK50 and HSK63, and for all SK models.

Sales

Anyone who sees the medium distributor in action usually has only one question:
Why has it taken so long for someone to come up with this idea?

The medium distributor is installed on various milling machines at our technical center.
Come and watch it in action and see the benefits for yourself.

If you are interested in the medium distributor and would like some further information or advice, do not hesitate to contact us.

Contacts

MERZ SYSTEMTECHNIK WERKZEUGMASCHINEN UNTERNEHMENSBERATUNG

Herbert Merz, Thomas Haag

Waldmössinger Straße 56
78713 Schramberg · Germany
Telefon +49 (7422) 520697
E-Mail: merz@merz-cnc-consult.de
www.merz-cnc-consult.de

Sales contact

ERTEC HANDLING & AUTOMATION

Ertec BV
Biesveld 2
NL- 5673 BN Nuenen
Netherlands

T. +31 (0)40 2982036
F. +31 (0)40 2982037
ertec@ertec.eu
www.ertec.eu

www.mediumverteiler.de