



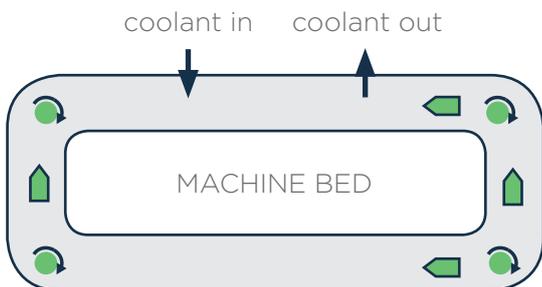
# Lubricoolant Supply Systems for BED FLUSHING

Enhance your Productivity  
Reduce your CO<sub>2</sub> Emissions

Bed flushing is often not designed based on needs. Frequently, pipe ends are simply squeezed shut or lubricoolant exits are mounted indiscriminately to machine tools. This leads to high consumption values and is expensive – besides procurement costs, the ancillary costs of the lubricoolants, e.g. for preparation, maintenance or disposal, also need to be taken into account.

Mostly only a few grams of dirt load per part are flushed from the bed with more than 200 l/min

## EXAMPLE VALUES



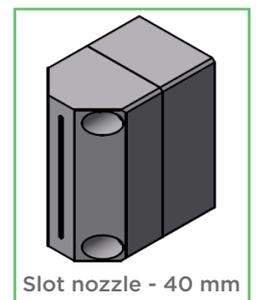
Pressure (p)	Flow Rate (Q) Corner Flusher	Flow Rate (Q) Groove Flusher
3 bar	5 l/min	35 l/min
5 bar	7 l/min	47 l/min

At a pressure of 3 bar, corner flushers – depending on their design – consume around 5l/min and groove flushers around 35l/min at a slot width

of lubricoolant. Chips build up in the corners and poorly accessible areas of the machine bed. Thus, in spite of high lubricoolant consumption, additional maintenance costs for cleaning are incurred or the machine fails due to disruption. That does not have to be the case!

Grindaix bed flushing systems clean your machine bed highly effectively using minimum lubricoolant quantities.

of 40 mm. According to our design (auditing your machine), the bed flushing operation is always switched to “no machining” mode. This saves an enormous volume of lubricoolant. Bed flushing in



the work cycle of the machine tool may be avoided without having a negative effect on the thermal distortion of the machines.

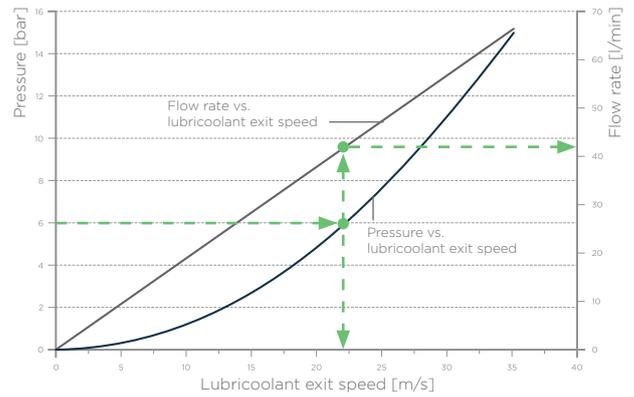
The stated values may differ depending on factors such as the machine tool, production process, nozzle type or lubricoolant.

## EXAMPLE CHARACTERISTIC CURVE

The nozzle diagram provides you with initial assistance in achieving suitable supply of the nozzle with respect to pressure and flow rate.

The total pressure (static and dynamic) is represented which would be measured directly in front of the nozzle. This pressure does not correspond to your pump pressure or the delivery height of the pump.

Pressure losses in the supply line between the pump and nozzle as well as the effects of any other lubricoolant discharge along the same supply line are not taken into consideration. These factors may be recorded and evaluated in our Coolant Audit. Only then can your system be optimized with respect to consumption.



Starting from the pressure, you can directly find the associated lubricoolant exit speed. The grey line shows the correlation between the lubricoolant exit speed and associated lubricoolant flow rate.

## AS MUCH AS NECESSARY, AS LITTLE AS POSSIBLE!

By using our efficient Grindaix nozzles for bed flushing, you avoid all waste and have a technology that is both innovative and sustainable. Our rotating corner flushers prevent chip build-up and reduce manual cleaning efforts. In combination with our groove flushers, you consume as little lubricoolant as possible during the cleaning process, but as much as necessary to avoid thermal component damage.

## ECONOMIC OPTIMIZATION OF YOUR PROCESSES

By reducing the entire lubricoolant consumption of your machine, you not only make cost savings but also free up reserves for your lubricoolant filtration, leading to an increase in filtration quality.

The scaling down or multiple use of peripheral units, such as pumps and coolers, allows you to considerably reduce other resources (oil, water, energy) as well as the CO<sub>2</sub> emissions from your production. The CO<sub>2</sub> emissions are calculated as an equivalent directly from your energy and resource consumption. Thus you also protect the environment.

## ORDER INFORMATION

### Bed Flushing ND (Needle Nozzle)

Name	Description
Corner Flusher	ø 600 mm with integrated fan nozzles (rotating)
Groove Flusher	slot nozzle with widths of 20 mm and 40 mm and slot height of 1.5 mm (fixed)

### Grindaix GmbH

Marie-Curie-Straße 8  
D-50170 Kerpen

+49 2273 • 95373 0  
+49 2273 • 95373 5

info@grindaix.de  
www.grindaix.de

