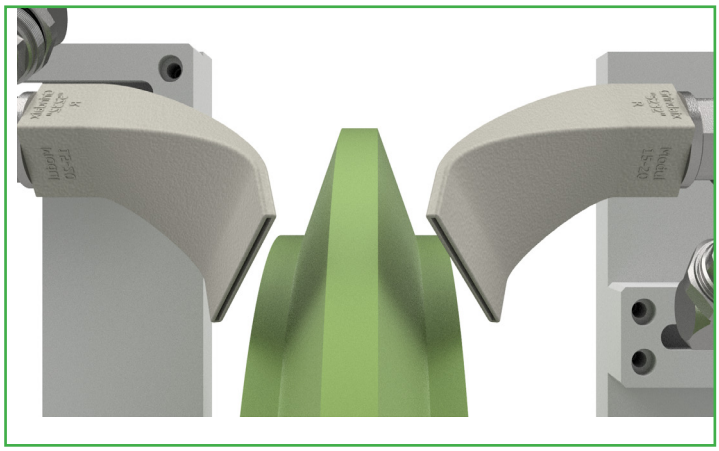
grindaix
A QUAKER HOUGHTON COMPANY

LUBRICOOLANT NOZZLE RETROFIT KIT
GEAR PROFILE GRINDING

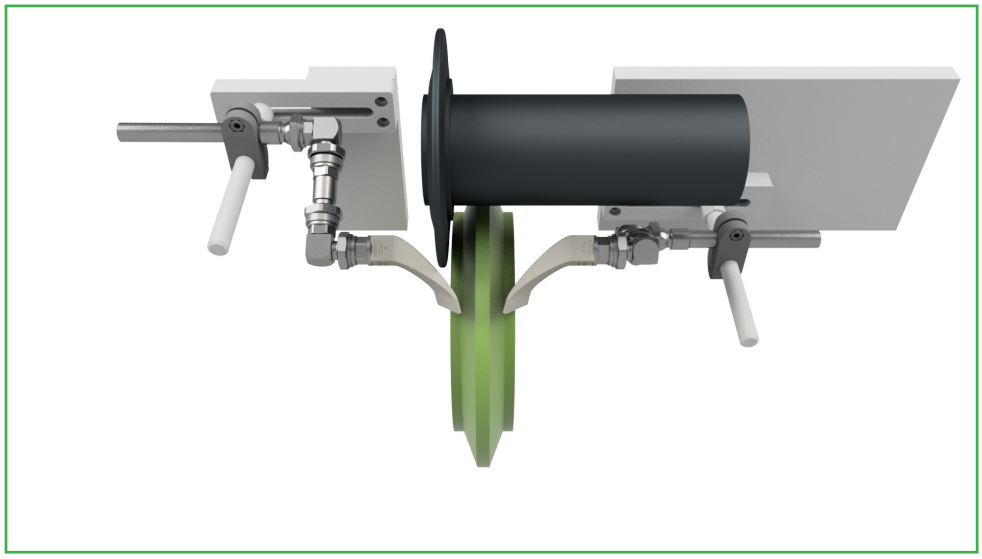
Nozzles for lubricoolant supply to the grinding zone as a plug & play complete nozzle system for retrofitting Kapp Niles machines (ZE series). The flow-optimized lubricoolant nozzles are specially adapted to the grinding wheel profiles and feature optimized jet quality. This enables targeted lubricoolant supply to the grinding gap.



Your Advantages

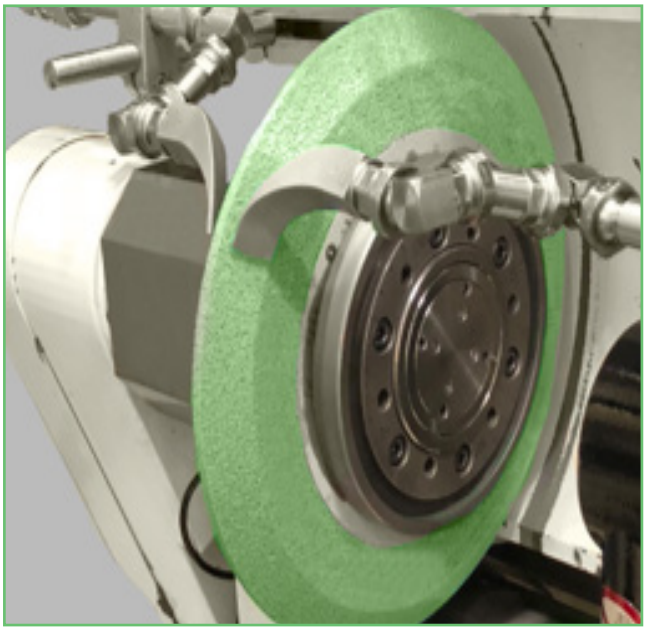
- Avoidance of grinding burn
- Increase in productivity
- Increase in tool life
- Lubricoolant savings
- Reduction in filtration load

Plug & Play nozzle set successfully field-tested!



The flexible nozzle holder enables simple, fast and reproducible alignment of the nozzles to the grinding wheel geometry. The system has already proven its worth in an industrial context many times by achieving targeted lubricoolant supply to the grinding gap, thereby avoiding grinding burn problems while at the same time increasing productivity and tool life.

Nozzle geometry and consumption values



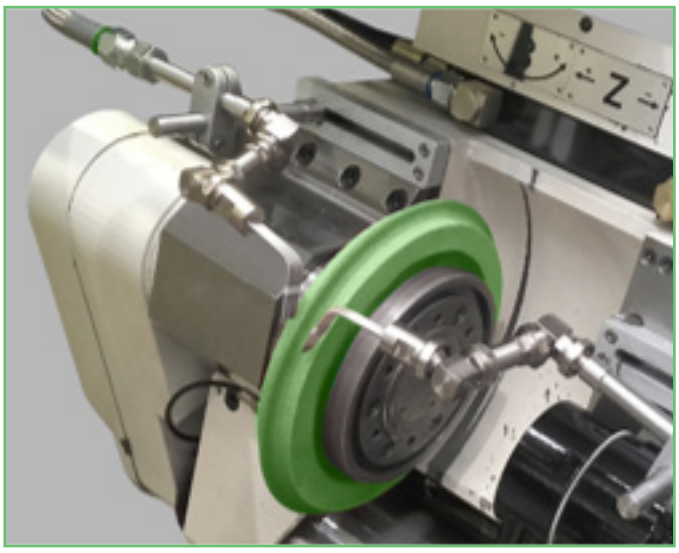
The flow-optimized needle nozzles and the 3D-printed nozzles are each available in left and right versions. To ensure efficient and collision-free lubricoolant supply to the grinding zones, the nozzles are designed for different module ranges.

The nozzles can be changed easily and without great assembly or adjustment effort. The table below shows the module ranges available and the associated example lubricoolant consumption values at a lubricoolant exit speed of 15 m/s. Based on our experience, we recommend a minimum lubricoolant exit speed amounting to 50 % of the grinding wheel circumferential speed.

Modul range	Nozzle type	Volume flow*
1 – 5	ND-SK-9-5260 _R&L	23 l/min
5 – 10	3D-SK-20-5259_R&L	36 l/min
10 – 15	3D-SK-30-5258_R&L	54 l/min
15 – 20	3D-SK-40-5232_R&L	78 l/min
Other module ranges are available upon request		

*at example lubricoolant expit speed of 15 m/s (vs =

The Grindaix gFLex articulated hose system provides the nozzle holder with flexibility and – depending on the hose length – position stability up to an operating pressure of 20 bar. This enables precise and simple alignment of the nozzles to your grinding gap geometry. The retrofit kit was specially developed for the gear grinding machine of the Kapp Niles ZE series and can be installed without any major conversion effort. The articulated hose elements can be adjusted flexibly and may be individually extended as required. Other nozzle holders can also be offered upon request.



Scope of the retrofit package (example)

2 x nozzles 3D-SK-20... 52... R/L

2 x articulated hose kit

1 x nozzle characteristic curve (correlation between lubricoolant pressure, volume flow and exit speed)

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