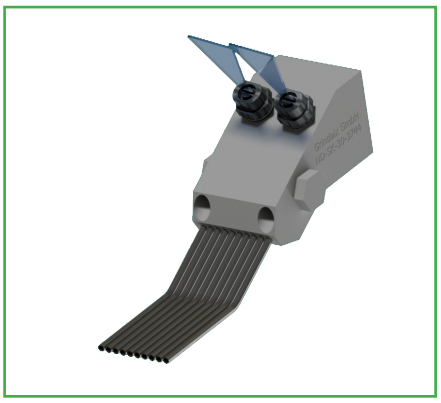
grindaix
A QUAKER HOUGHTON COMPANY

Coolant Supply Systems for
SURFACE AND PROFILE GRINDING

Due to the long contact lengths, very high machining temperatures often occur during surface, creepfeed and profile grinding. Thermal damage to components, especially in deep grinding, must be avoided at all costs. For this purpose, we offer the Grindaix Dual Nozzle, which is specially designed for the use of highly porous and also highly hard abrasives.



Variant 1: Needle Nozzle

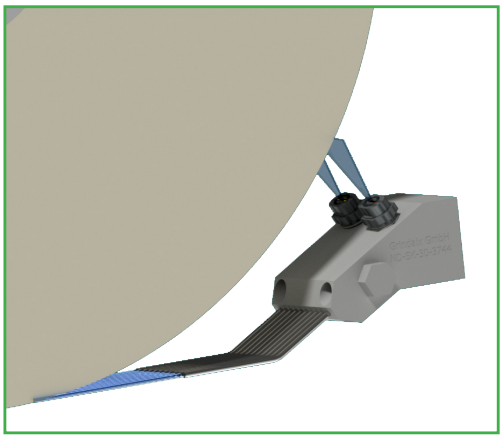
PRODUCT ADVANTAGES

- Dual nozzle: cleaning and cooling in one nozzle
- Only one supply centrifugal pump required
- Ink. Coolant Pointer
- Ink. Coolant Display

Improve your productivity
Reduce your CO_2 emissions

FUNCTION

The grinding wheel is both cleaned and the grinding point is supplied with sufficient coolant by one nozzle. This Grindaix nozzle can be supplied with less wear-prone centrifugal pumps and does not require a separate protective filtration unit as would be necessary with screw pumps. These Grindaix nozzles are custom mounted to the mounting locations in your grinding machine.



2 in 1 Nozzle

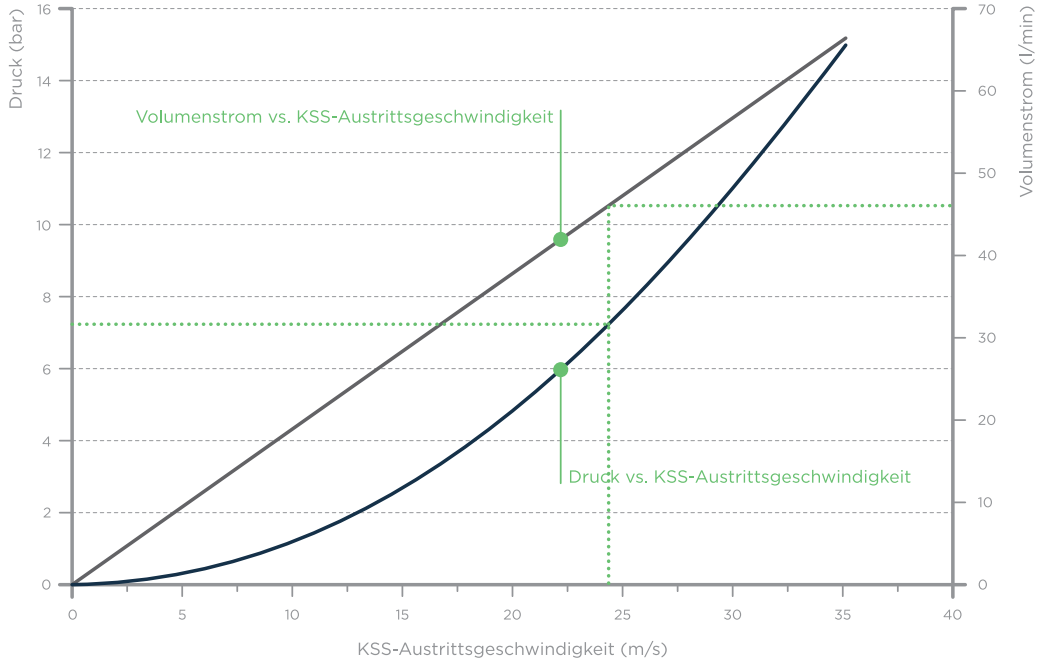
EXAMPLE CALCULATION (FOR OIL)

Düse	Druck	Volumenstrom	KSS-Austrittsgeschwindigkeit
Dual nozzle	20 bar	97 l/min	-
Proportion of needle nozzle		72 l/min	42 m/s
Proportion cleaning nozzle		25 l/min	

THE NOZZLE CHARACTERISTIC CURVE

The nozzle diagram is intended to provide you with an initial aid to realizing a suitable supply to the nozzle in terms of pressure and volume flow. It shows the total pressure (static and dynamic) which you would measure directly in front of the nozzle. This pressure does not correspond to your pump pressure or the head of the pump. Pressure losses in the supply line between the pump and the nozzle, as well as the influence of any other cooling lubricant outlets on the same supply line, are not taken into account. Only in this way can your system be designed to optimize consumption. Starting from the pressure, you will directly find the corresponding cooling lubricant discharge velocity. Via the gray straight line, you will then find the relationship between the coolant discharge velocity and the associated coolant volume flow.

EXAMPLE NOZZLE CHARACTERISTIC



ORDER INFORMATION

Grindaix nozzle for crankshaft grinding

Item No.	Description
ND-SK-	The nozzles are individually designed for a particular crankshaft geometry and/or size set. All nozzles are available with a characteristic line.

Auxiliary Equipment

Name	Description
Pressure Sensor	analog/digital
Pressure Sensor Connector	Standard G 1/4“
Compressed air connection	Cleaning the nozzle ø ¼“ with compressed air
Wear protection	available in all widths and shapes
Profile shape stabilizer	available in all widths and shapes
Coolant-Display	Grinding fire monitoring device

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