

## Nanojet Piezovalve NJ-K-4...



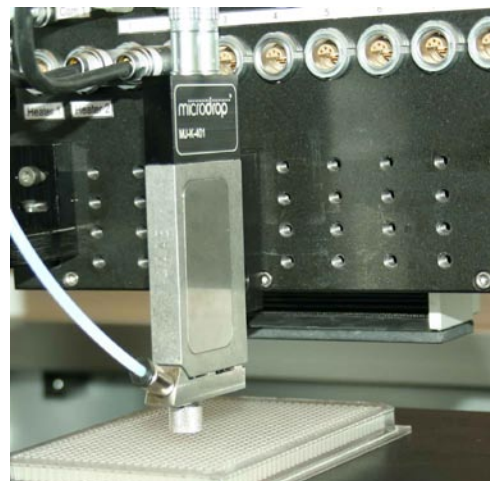
### ADVANTAGES

- high accuracy due to precisely controlled piezoelectric trigger pulse
- stable and robust system for industrial application
- normally-closed valve, that avoids liquid dripping and contamination
- 24-hours non stop application possible
- very long life time
- easily exchangeable nozzles for various applications
- very good chemical stability for the usage of complex liquids
- intelligent upgraded processor with advanced timing and automatic identification
- volume range from 8nl to 10 $\mu$ l per pulse
- maximum dispensing frequency of 450Hz

### Technology

The Nanojet Piezovalve NJ-K-40xx is a normally-closed jet dispensing system, based on a piezoelectric driven mechanical valve. The Nanojet Piezovalve is able to dispense volumes contact-free in a range from 8nl up to 10 $\mu$ l per dispensing cycle with a viscosity range of up to 2000mPas. This versatile jet dispensing system with high precise switching performance of the piezovalve delivers a very high volume accuracy of approx. 1%. The possibility to fine tune the trigger impulse enables the adaptation for dispensing usual liquids as well as complex liquids. The on one hand mechanically robust and on the other hand finely controllable Nanojet Piezovalve NJ-K-40xx is eminently suitable for high quality dispensing also in industrial applications.

The liquid to be dispensed is transported from a liquid reservoir (or from a customary cartridge) to a nozzle unit pressure supported. The nozzle unit is detachable. Depending on the application, nozzles in form of a flat plate or as a needle can be inserted into the nozzle unit. Possible nozzle diameters for nozzle plates range from 70 $\mu$ m up to 200 $\mu$ m. A typical inner diameter of a nozzle needle is 150 $\mu$ m. The dispenser nozzle can easily be exchanged



due to the patented quick-exchange system so that down-times, due to nozzle clogging are reduced to a minimum.

The flat design of the valve with a thickness of only 10mm allows the combination of several valves in a compact array and an optimal embedding into other systems. External control via a host computer is possible using SPS or RS232 interfaces. Other interfaces can be provided on request.

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### TECHNICAL DATA

Nanojet Piezovalve NJ-K-4...	
Dispensing quantity range	8nl to 10µl per pulse*
Feed pressure range	300 to 3500hPa*
Viscosity of dispensed fluids	0,4 to 2000mPas*
Switching time	approx. 1ms
Dispensing quantity accuracy	approx. 1% (with P, T = const.)*
at a maximum dispensing frequency of	450Hz
continous load dispensing frequency	200Hz*
Life time	>> 10 <sup>9</sup> dosages (regular maintenance required)
Operating temperature range	10 to 50°C
Weight	220g
Nozzle	Quick exchange system
Stability	All aqueous media, organic solvents, weak acids and alkaline solutions
Dimensions	115 x 39,5 x 10mm
Standard interfaces (other interfaces on request)	RS232C; 24V SPS
Control unit (external)	NJ-E-4092 and NJ-E-4133

subject to change without prior notice  
NANOJET\_EN\_0714

\* depending on liquid in use



Nanojet driver electronics  
(NJ-E-4092 and NJ-E-4133)  
for Nanojet piezovalve NJ-K-4...