

Hellma is an independent supplier and world leader in spectroscopic analytical solutions and has been the leading manufacturer of precision optical products made of glass and quartz glass for UV/Vis/NIR spectroscopy for over 100 years. Customers from several industries and scientists worldwide value Hellma products for their high quality and reliability. In a wide range of process and laboratory applications, their high precision guarantees the best and reproducible measurement results in optical analysis.

Talk to us about your application and your requirements - we will be happy to advise you!

Hellma GmbH & Co. KG  
Klosterrunsstraße 5  
79379 Müllheim / Germany  
phone + 49 7631 182 1010  
info.de@hellma.com  
www.hellma.com

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## Hellma®

UV/Vis/NIR Probe Falcata 12

## Knick >

Ceramat Retractable Fitting



# The Perfect Duo You Can Rely On

FOR HIGHER PROCESS SAFETY,  
EFFICIENCY AND CONTINUOUS MANUFACTURING

- Cleaning and maintenance without interrupting the production process
- Continuous Manufacturing with real-time quality assurance
- Process Analytics with UV/Vis/NIR Spectroscopy - even in harshest media flows

MADE IN GERMANY



➤ Ideal for Chemistry and Petro Chemistry, Minerals and Mining, Pharmaceuticals and Life Science

# MAKE YOUR UV/VIS/NIR PROCESS ANALYTICS HIGHLY EFFICIENT AND SAFE

## Maintenance-free, patented retractable fitting

The Knick Ceramat is a unique and patented retractable fitting with a ceramic seal to the process. In combination with optical spectroscopy probes from Hellma, it is therefore ideal for implementing continuous manufacturing and process analytical technology. Consequently, the cleaning, calibration and maintenance of an optical probe can be carried out without interrupting the production process.

The ceramic seal and the airlock principle of the Ceramat guarantees safe operation. Even under very harsh conditions or when using hazardous or aggressive media, the Knick Ceramat fitting is the better alternative to fittings sealed with O-rings.



Thanks to the unique interlock principle of the Knick Ceramat retractable fitting, optical probes can be coupled in and out of the running process without interruption. The probe can therefore be serviced or replaced outside the process while the process continues to run.

## Automated Cleaning on Board

When processing sticky products and products with a tendency to form deposits, retraction devices play a vital role in the continuous and trouble-free operation of optical probes. Routine work on probes can be carried out quickly and easily with a retractable fitting. A process for the automatic cleaning of optical immersion probes has also been developed in cooperation. The degree of contamination of the optical window is detected via the measuring signal and the cleaning of the probe is automated cyclically if necessary.



### GOOD TO KNOW!

The Knick Ceramat is ideally suited for the use of optical probes from Hellma for modern molecular spectroscopy (UV/Vis/ NIR). This means that process analytical technology can be realized in real time with continuous manufacturing. It is vital that optical probes have a completely clear view into the process or medium. This is not possible with conventional push rod fittings due to their design.

# UV/VIS/NIR SPECTROSCOPY PROBE FALCATA 12



Optical spectroscopy helps to keep an eye on production processes and quality controls. The key to success is a precise and robust process measuring point that is directly integrated into the running process and provides relevant process data in real time. UV/Vis/NIR probes and measuring cells from Hellma represent the industry standard and are an integral part of modern

process analytical technology. In combination with a Knick retractable fitting, the efficiency at the measuring point is noticeably improved. The investment usually pays for itself after a short time.

- Interchangeable path length tips for variable path lengths
- Great flexibility in the measurement of different media in particular due to quick and easy exchangeability with a Knick Ceramat retractable fitting



## Fields of application

- UV/Vis/NIR process analytics
- Transparent or slightly cloudy media
- Reaction monitoring during chemical synthesis
- Control of process chromatography
- Determination of color numbers
- Measurement of coatings and adhesives in continuous processes
- Reaction monitoring of polymerization reactions
- Moisture or solvent content of wet or sticky solids
- Pharmaceutical applications with higher/ particularly high requirements for hygienic design and cleaning



### Advantages of combining the Knick Ceramat retractable fitting with the Falcata 12

- Realization of continuous manufacturing
- No process interruptions
- Simple referencing measurements
- Automatic probe cleaning
- Fast adjustment of the optical path length