

## sera KKV Dosing System

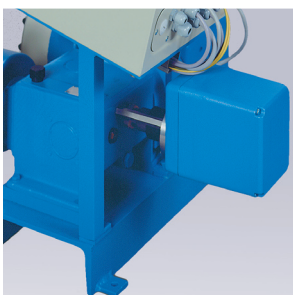
was developed in collaboration with DyStar for dosing and mixing Levafix® - and Re-mazol® - padding liquors when dyeing using the single-bath padding process.

### Capability characteristics

- Fully automatic operation
- Highest accuracy
- The most modern control- and pump technology
- High operational safety
- Easy to operate
- High lifetime
- Low maintenance
- Complete accessory programme

### Application

- For dyeing and mixing in the textile industry (automatic KKV dosing system)



## Function

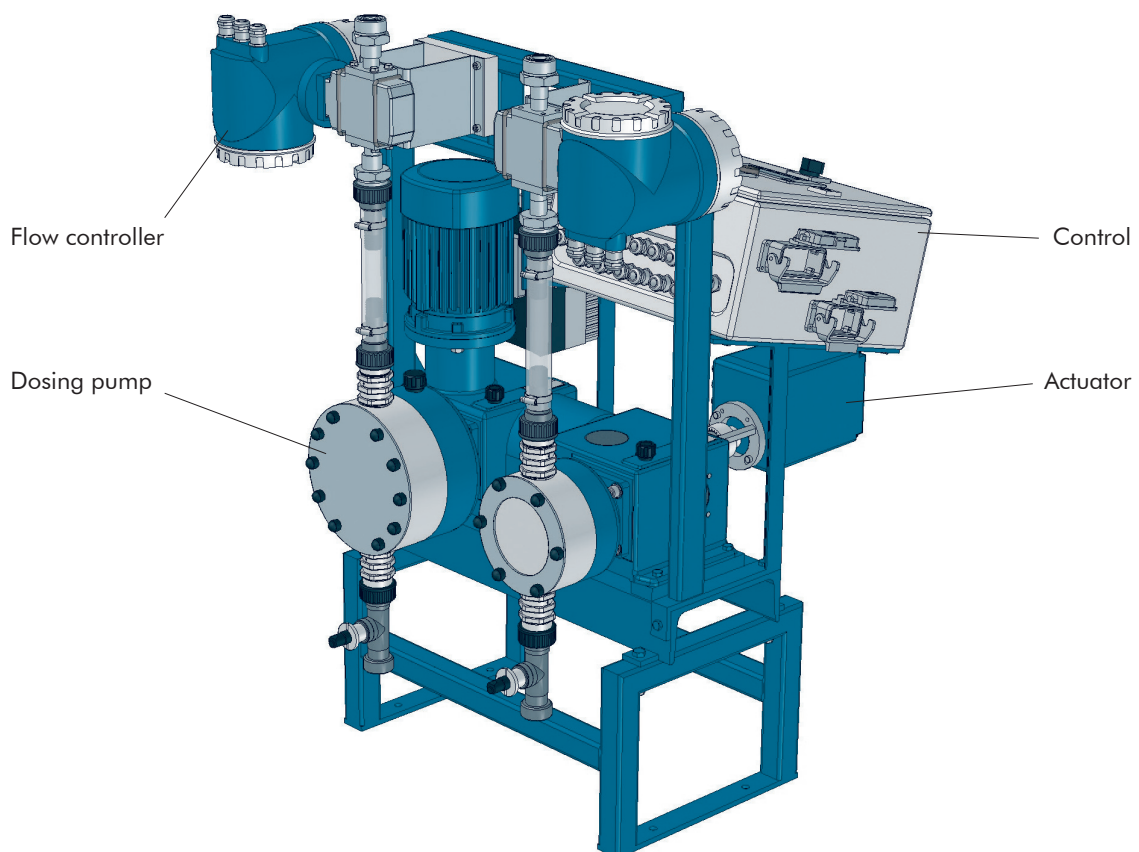
The alkaline dosing head is equipped with an electric stroke length actuator. The dosing heads are each equipped with a downstream magneto-inductive flow meter to collect the current flow capacities of both heads exactly. Both dosing heads are adjusted in a manner that suction and dosing stroke are performed simultaneously.

The control system consists in the main of a process logic control (PLC) with operator panel as display.

While the pump is running the PLC records and compares the signals of both flow meters. The actuator is triggered even at the slightest deviation from the preset mixture ratio (e.g. 4 : 1) in order to adjust the stroke length of the alkaline dosing head. The duration of the pulse is exactly calculated from the deviation.

This technology guarantees a constant mixture ratio of alkaline and dyestuff, independent of any interruption or trouble like different suction heights, viscosities, temperatures, dosing quantities etc. Malfunctions are detected immediately and alarm is given and the system shuts down if they cannot be corrected.

The alkaline and dyestuff consumption is added and indicated at the operator panel. This way the correct mixture ratio can be shown any time.



## Technical Data

Type	Total capacity 50/60 Hz  litre/minute	Chemical consumption		Power consumption  approx. kW	Weight  approx. kg
		litre/hour			
		Color	Lye		
KKV-20,8.1	20,8	1000	250	1,0	170

## Electrical data / Control technology

Input	4 digital inputs (potential bonded)	release pump, release control, fast stop, pump flushing
	1 analogue input	0/4-20 mA from external fill level controller or external fill level measurement (analog signal must be potential-free)
Output	4 potential free outputs	flush valve, drain valve, color ready, collective fault
Supply voltage	3 x 400 V / 50 Hz / N / PE	
Enclosure	IP54	
Control voltage 1	230 V / 50 Hz	
Control voltage 2	24 V DC	

## KKV-Dosing System

The traditional KKV pump is a diaphragm pump with two dosing heads for dyestuff and alkaline solution. The dosing head for alkaline is equipped with a manual stroke length adjustment to adjust the mixture ratio 4 : 1.

In order to meet with today's demands on reproducibility and quality assurance this ratio has to be checked at regular intervals and manually corrected, if need be.

The new system monitors the preset mixture ratio permanently during operation. Any deviations are adjusted automatically so that dosing errors are eliminated.

## Standard scope of delivery

- Dosing pump
- Driving motor with integrated frequency converter
- Mounted actuator (lye-dosage)
- Stroke frequency transmitter
- 2 magneto-inductive flow controllers
- 2 capacitive sensors for fluid monitoring
- Mounted control (PLC-technology) with operator panel
- System-wiring and -piping incl. mounting-frame

## Accessories (optional)

- Diaphragm pressure-keeping valve
- Connection parts for diaphragm pressure-keeping valve
- Suction basket type 722
- Suction basket type 724
- T-piece made of PVC, DN 25
- PVC-hose with cross-textile ply
- Hose clamp

Local **sera** - Representative:


**Seybert & Rahier  
GmbH + Co. Betriebs-KG**

sera-Straße 1  
34376 Immenhausen  
Germany  
Tel. +49 5673 999-00  
Fax. +49 5673 999-01  
www.sera-web.com  
info@sera-web.com