Diaphragm Combination Pump

RF410.2-1100e/RK410.2-450e

sera – combination pumps

of series RF410.2 -1100e/ RK 410.2 -450e are single diaphragm combination pumps designed for industrial use and highest operational reliability. Performance range 1320 l/h (pump head 1) and 540 l/h (pump head 2), pressures up to max. 3 bar.

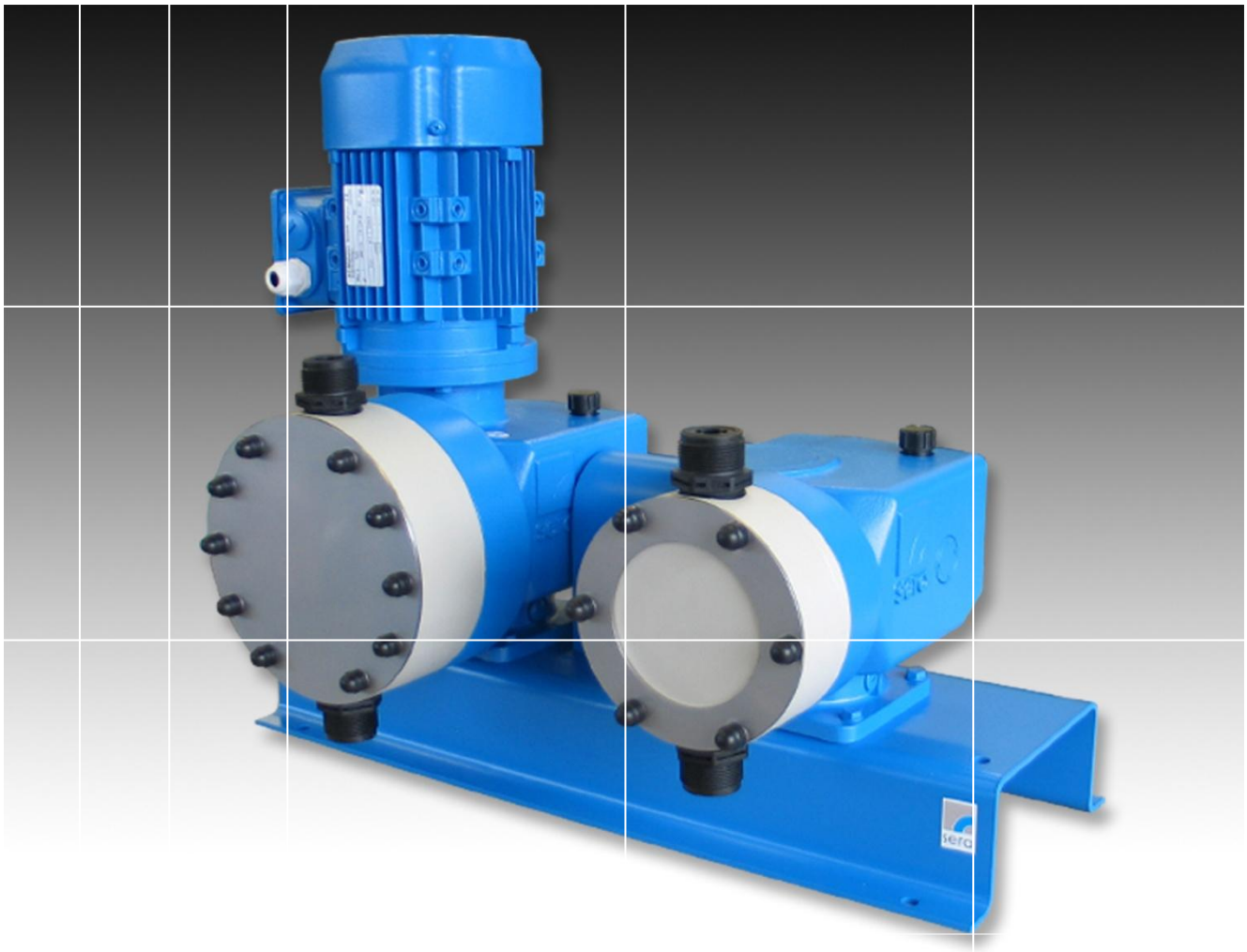
Application range

These **sera** – diaphragm combination pumps were developed for metering and mixing Remazol padding liquors when dyeing using the single-bath padding process.

...futher features of performance

- high dosing accuracy
- long service life of diaphragms*
- high-quality materials
- linear control characteristic
- low maintenance
- low operating expenses
- leakage-free
- unlimitedly to run dry
- easy to operate
- low weight

* compared to common conventional diaphragms



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Diaphragm pumps

Feed the media from the storage tanks into the foulard through the stroke movement of their diaphragms.
The flow rates oft he pump heads are set to a mixing ratio of 4:1 at the factory.

The design

Ensures that the pumping and drive units are completely separated from each other by a diaphragm. All parts which come into contact with the media are made of chemical-resistant materials.

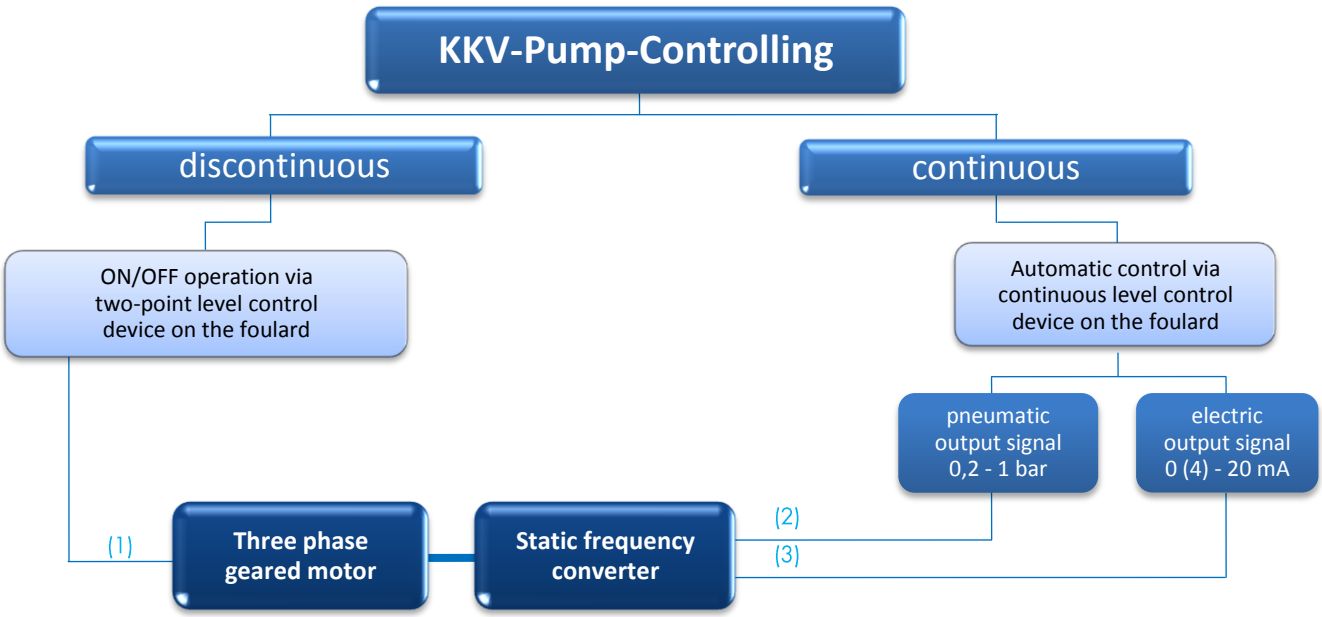
Material design

Pump heads made of PP or stainless steel with PTFE-covered diaphragms.

Accessories

For the optimum installation of a dosing pump **sera** can supply all the necessary accessories such as valves, pulsation dampers, injection fittings, dosing tanks, flow controllers, etc. against your order.

The purpose of the KKV pump ist o always keep the flow rate of the mixture of dye (4 parts) and lye (1 part) as constant as possible in the foulard. This extremely accurate feeding oft he foulard ensures perfect dyeing.



I. discontinuous control

A discontinuous flow rate of the KKV pump control (1)
Therefore only provides the required conditions to a certain degree.
With this process the KKV pumps are only switched on when a level control device indicates that the minimum level on the foulard has been reached.
The pumps only continue to pump intil the level control divice indicates that the maximum level has been reached.

II. continuous control

A continuous control is preferred for the KKV combination pumps in most cases.
This means that the pumps are running all the time and continuously feed the required dosing quantities.

These dosing quantities are controlled via an automatic controlling device.

This automatic control is effected with the help of a continuous level-regulation at the foulard (2)or (3) which always ensures the required level in the foulard.

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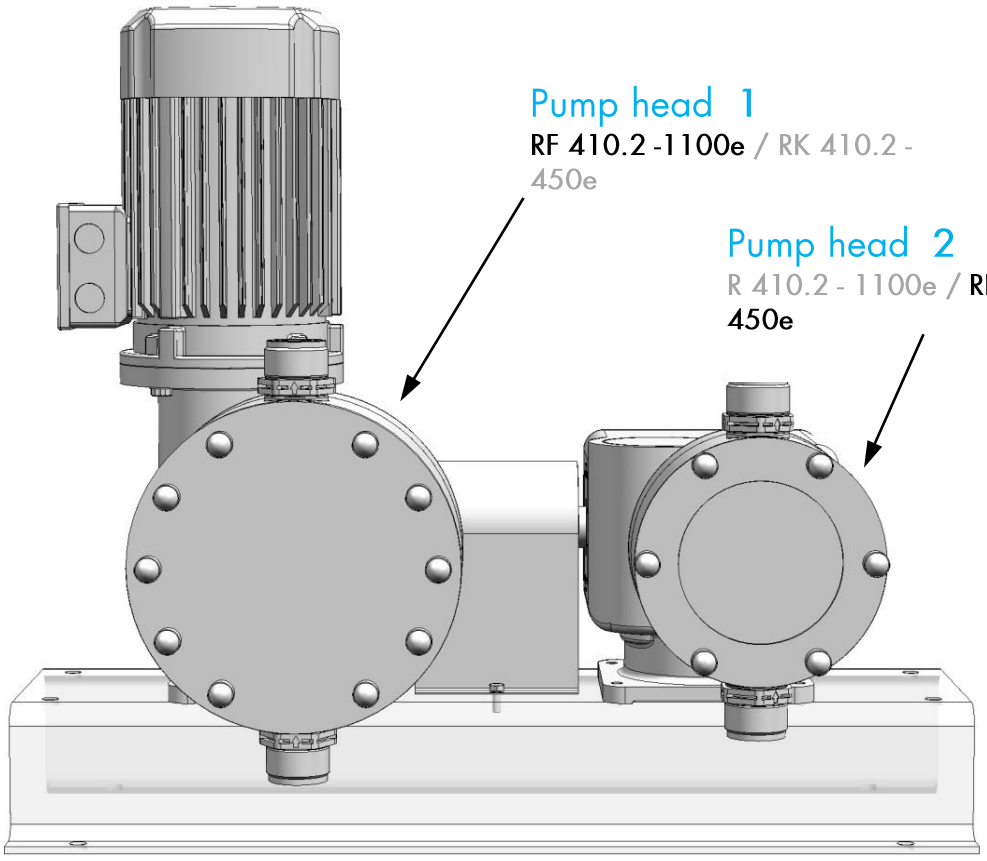
Technical Data

Pump type	Nominal capacity		Max. permissible counter pressure	Minimum-/maximum permissible pressure at inlet of pump	Maximum suction height	Nominal stroke frequency		max. stroke length
	Q_N 50 Hz	Q_N 60 Hz	$p_{2\ max.}$	$p_{1\ min./max.}$		n_N 50 Hz	n_N 60 Hz	h 100
	[l/h]	[l/h]	[bar]	[bar]	[mWC]	[min -1]	[min -1]	[mm]
RF 410.2-1100e (*pump head 1*)	1100	1320	3	-0,3/0	3	76	92	22
RK 410.2-450e (*pump head 2*)	0 - 450	0 - 540						13



(detailed dimensions see **sera** – data sheet No. 10539.)

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Drive

The drive unit of our **sera** - single combination pump consists of a proven motor with a stroke mechanism in a robust aluminium housing.

sera - aluminium housings can cope with even extreme operating conditions due to the thickness of the material and the surface treatment.

Control

The capacities of the **sera** - diaphragm pumps are constant or infinitely variable.

Manual capacity control (head 2) via:

- Adjustment of the stroke length

Automatic capacity control, dependent on analogue or digital input signals via:

- Three-phase motors with frequency converters

Flow rate adjustment

- without stroke length adjustment (...410.2 - 1100e)
- manual stroke length adjustment with protection cap (...410.2 - 450e)

Special designs

For special dosing problems we offer individual solutions:

Double valve assemblies, spring loaded, flushing devices for intermittent and final cleaning to prevent sedimentation in the pump body. Stroke transmitting device, diaphragm rupture alarm.

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Accessories

- Base plate 190 x 680
- Clutch R28 with protection
- Preset mixing ratio: 4:1

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