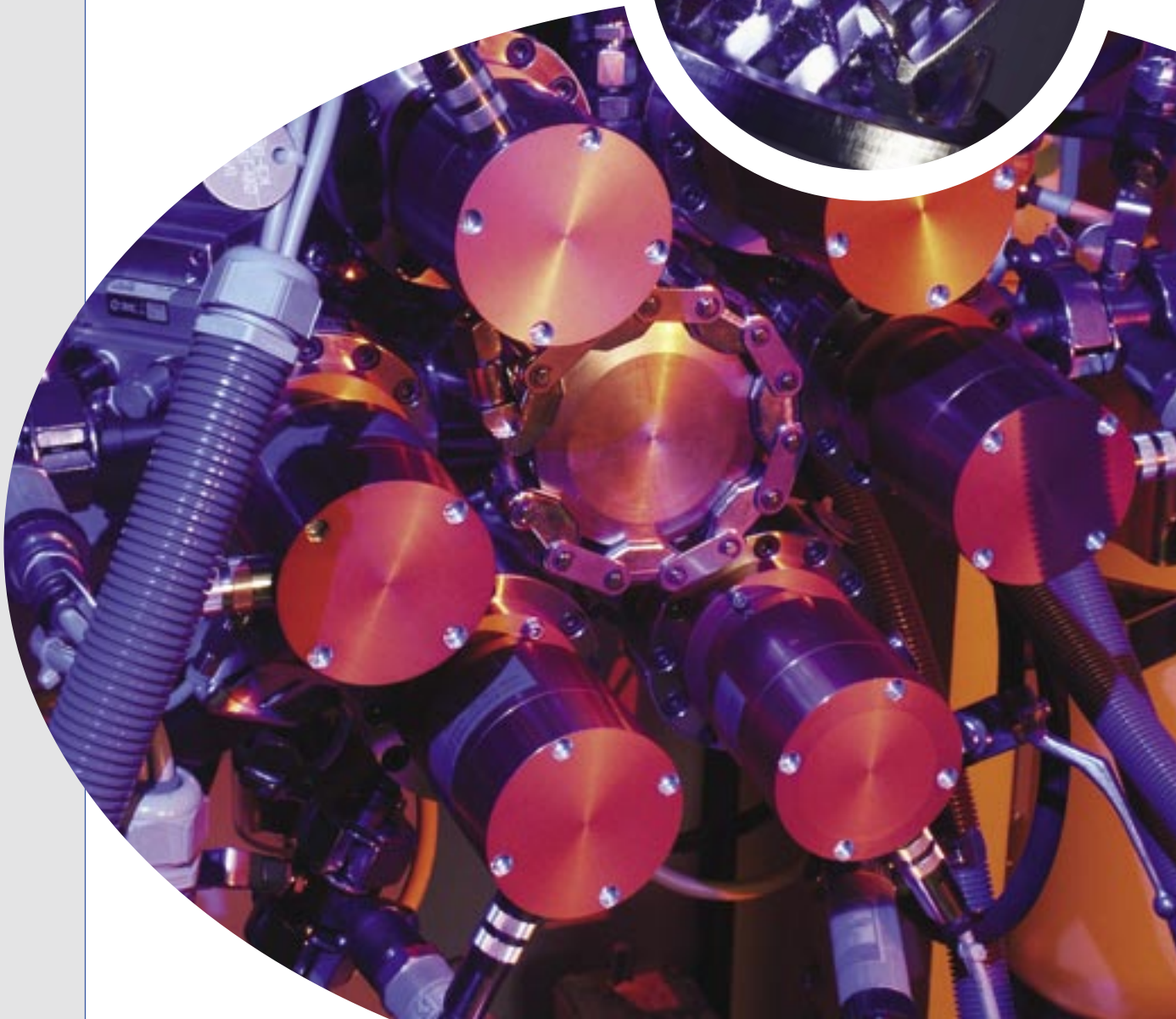


Dosing system for in-line mixing

SD-XK / XKV

- Flexible multi-component system
- „Just-in-time“ production
- High output
- Highest dosing accuracy
- Self-cleaning mixing system
- Upgradeable up to 13 components
- Flexible upgrade



SD-XK / XKV Dosing system for in-line mixing

The Basic Machine

In essence, the basic machine consists of a single dosing unit with a dosing volume of 650 ml. All switch cabinets are mounted on the basic frame. There is also space enough for an additional switch cabinet (necessary in case of an upgrade for more than 6 components).

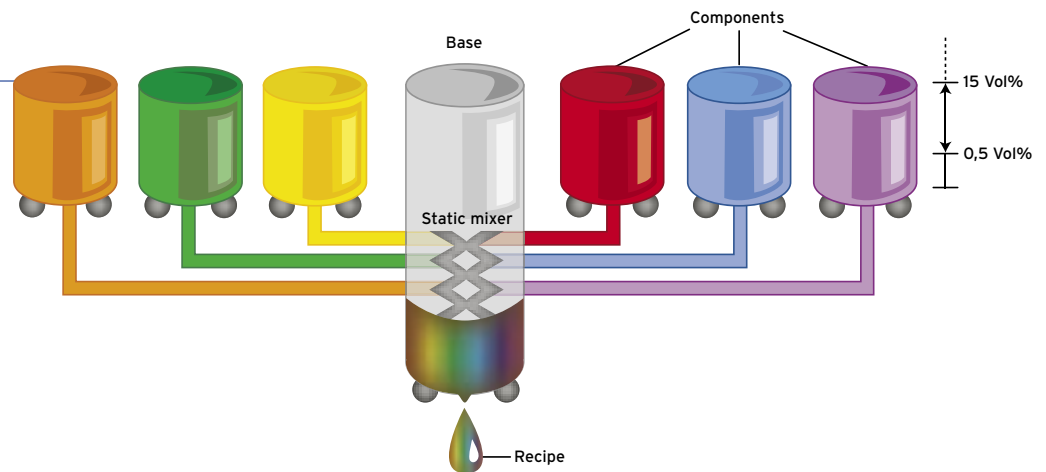
The dosing unit can be mounted on a turning device, in order to be connected to different filling systems (e.g. sausages, cartridges, or drums).



The Supply Unit

The supply unit with integrated dosing pump takes care of the exact dosing and feeding of the components (e.g. pigments, catalysts etc.) to the mixing chamber. The dosing pump is screwed to the supply unit, but could also be delivered without supply unit, e.g. in case of already existing tanks on-site.

For a complete functionality we recommend the use of **Schwerdtel** supply units. Integrated agitators prevent the sedimentation of suspended solids in the components, fully automatic level indicators allow an automatic re-filling. Even a nitrogen gassing can be integrated. All this functions are then integrated in our control system.



The "XK" version: In order to produce your final product, up to 12 components can be dosed into the base material. The smallest dosing quantity of a single component is 0,5% of the volume of the basic dosing. Should this not be sufficient, the equipment can be upgraded to the "XKV" version.

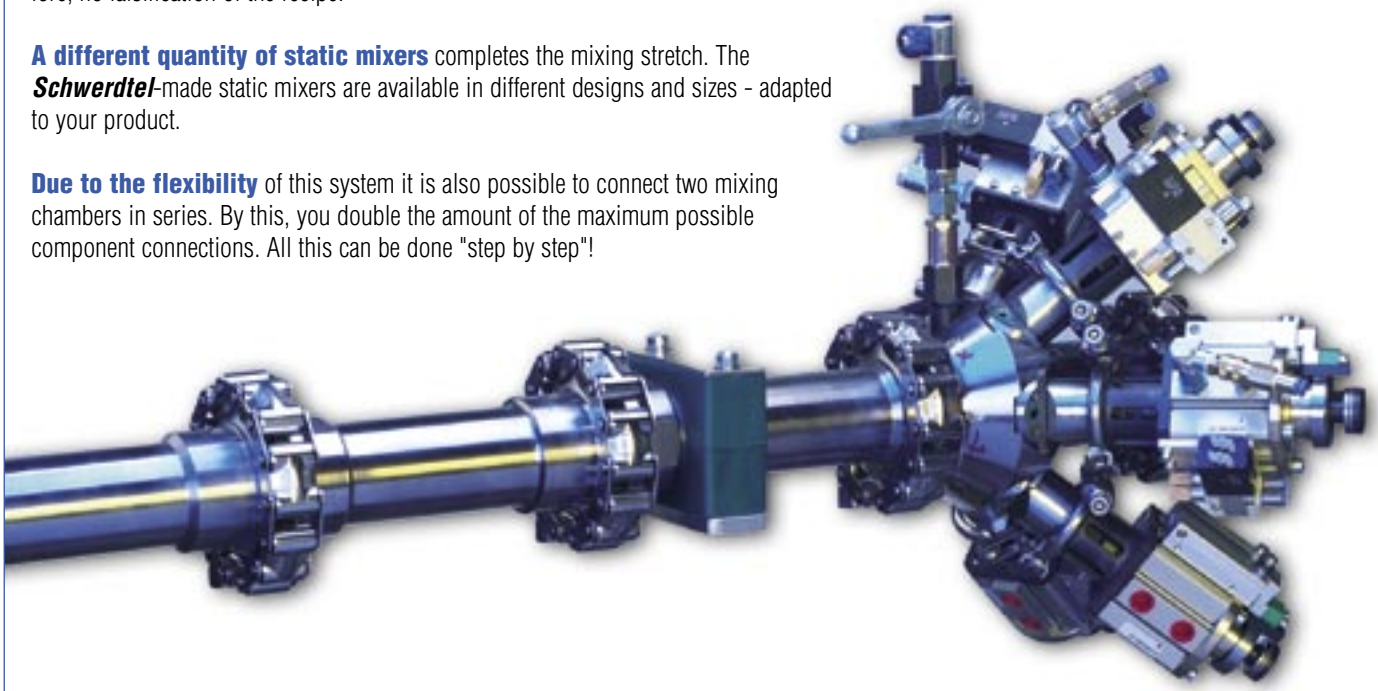
Without any cleaning effort the change-over from one recipe to another takes place. The system is self-cleaning, and only after a few dosings, you already achieve the final result and can continue the production.

The mixing stretch

All feedings of the components are brought together in the mixing chamber. Automatic injection valves guarantee the precise inflow of exact the quantity that was dosed by the component pump. There is no post-flow of the component and, therefore, no falsification of the recipe.

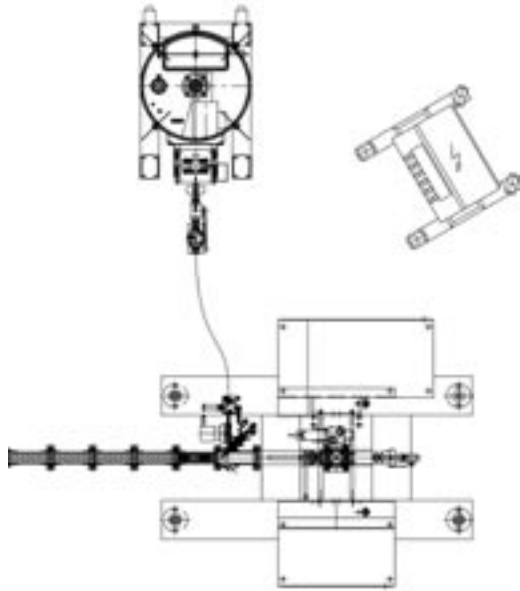
A different quantity of static mixers completes the mixing stretch. The **Schwerdtel**-made static mixers are available in different designs and sizes - adapted to your product.

Due to the flexibility of this system it is also possible to connect two mixing chambers in series. By this, you double the amount of the maximum possible component connections. All this can be done "step by step"!



SD-XK / XKV Dosing system for in-line mixing

1 The XK

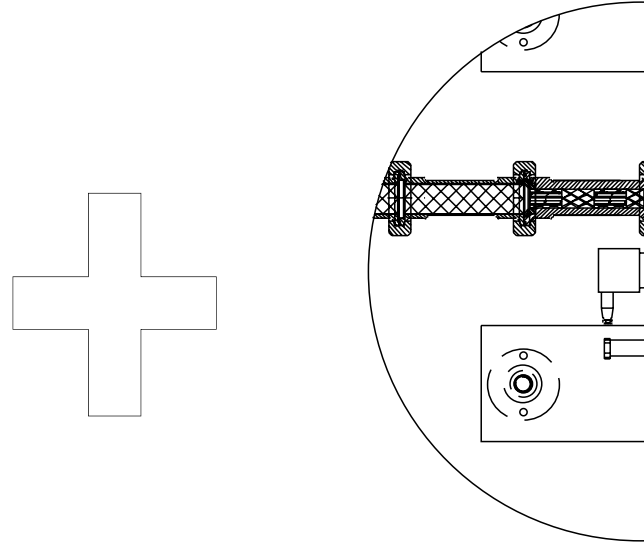


Flexible also as basic machine:

The **XK** machine allows the mixing of components to a base component in the range of 0,5 to 15 Vol% (infinitely adjustable). By the integration of a second mixing chamber, up

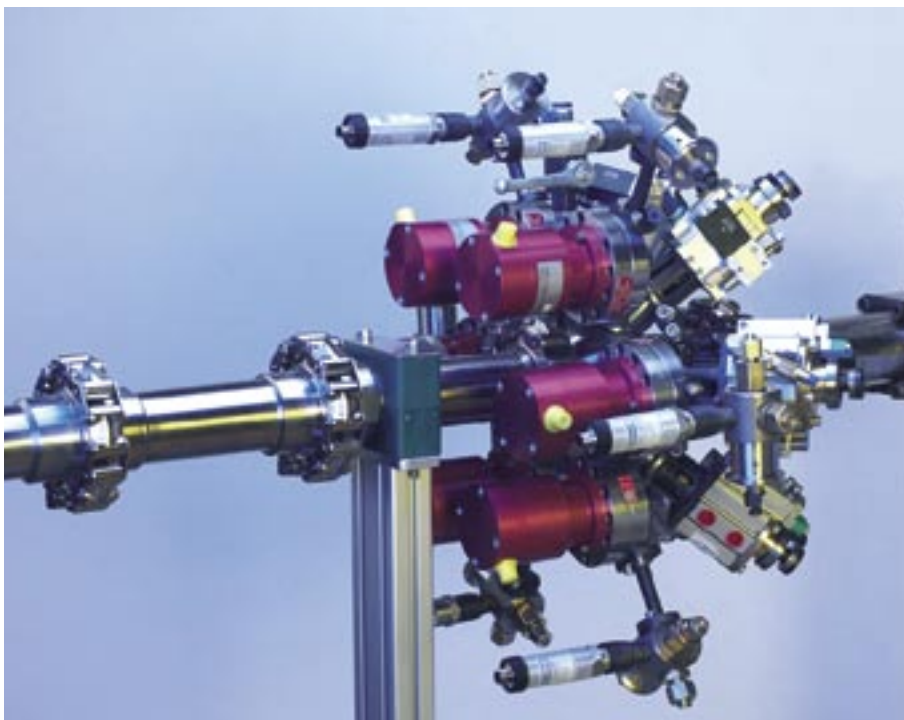
to twelve components can be connected. The change-over from one component to another is self-cleaning and takes place automatically. The **XK** is a machine that can cover reliably major parts of your production.

2 The Upgrade – The

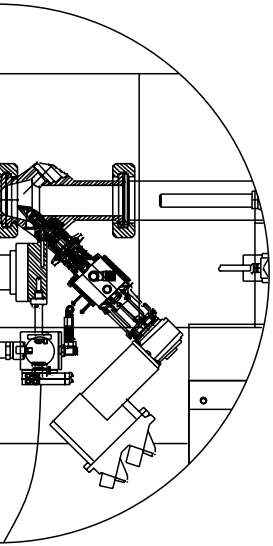


Upgradeable at low expenses:

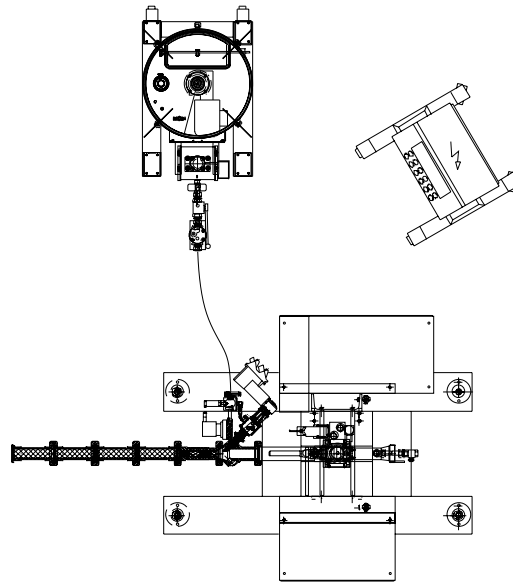
Only possible with **Schwertel**. Due to its modular design, the same machine can now be upgraded at low expenses. A special drive for the injection valves is connected to the existing valves and an automatic back-flow system will be added. In connection with the corresponding upgrading of the control



Novelty!



3 The XKV



system, you convert your "XK" machine into a "XKV" machine! This upgrading can be carried out at any time – depending on the requirements of the marketing, the production or the development of your products.

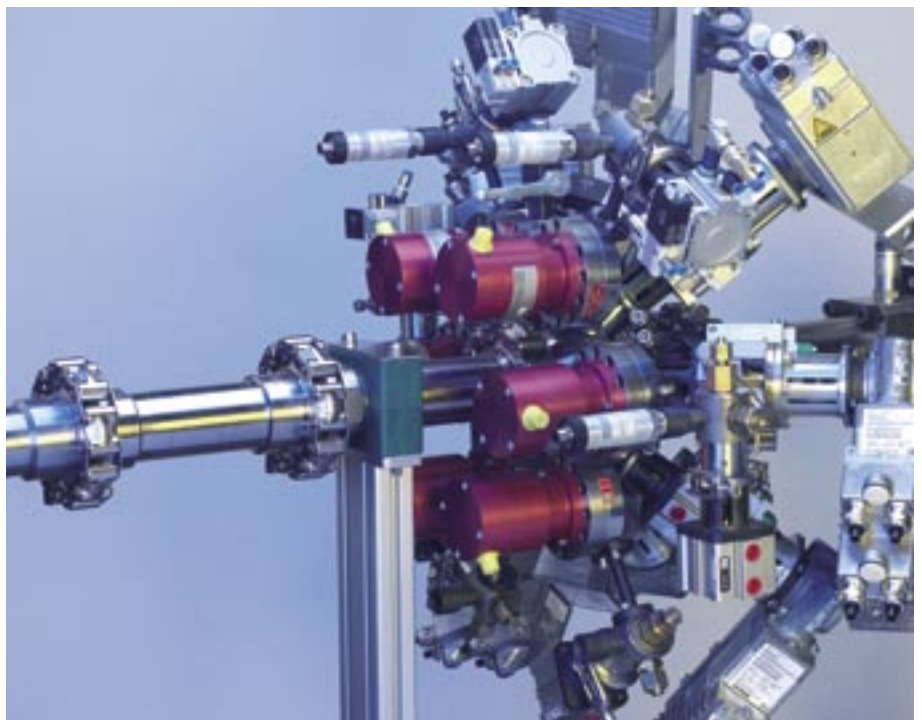
➤ Flexibility, thought over to the last detail !

The High-End-Version:

With the so-called **XKV** machine you can now create hundreds of recipes. The dosing range is between 0,01 Vol% and maximum 15 Vol% (infinitely variable). So, it is for example possible to create with only a few base colours all thinkable colour shades.

Highly exact dosing:

Due to the high amount of maximum possible additive components in combination with the highly exact dosing accuracy, the machine can – in general – take over tasks, which in former time were only possible with the help of classical mixers.

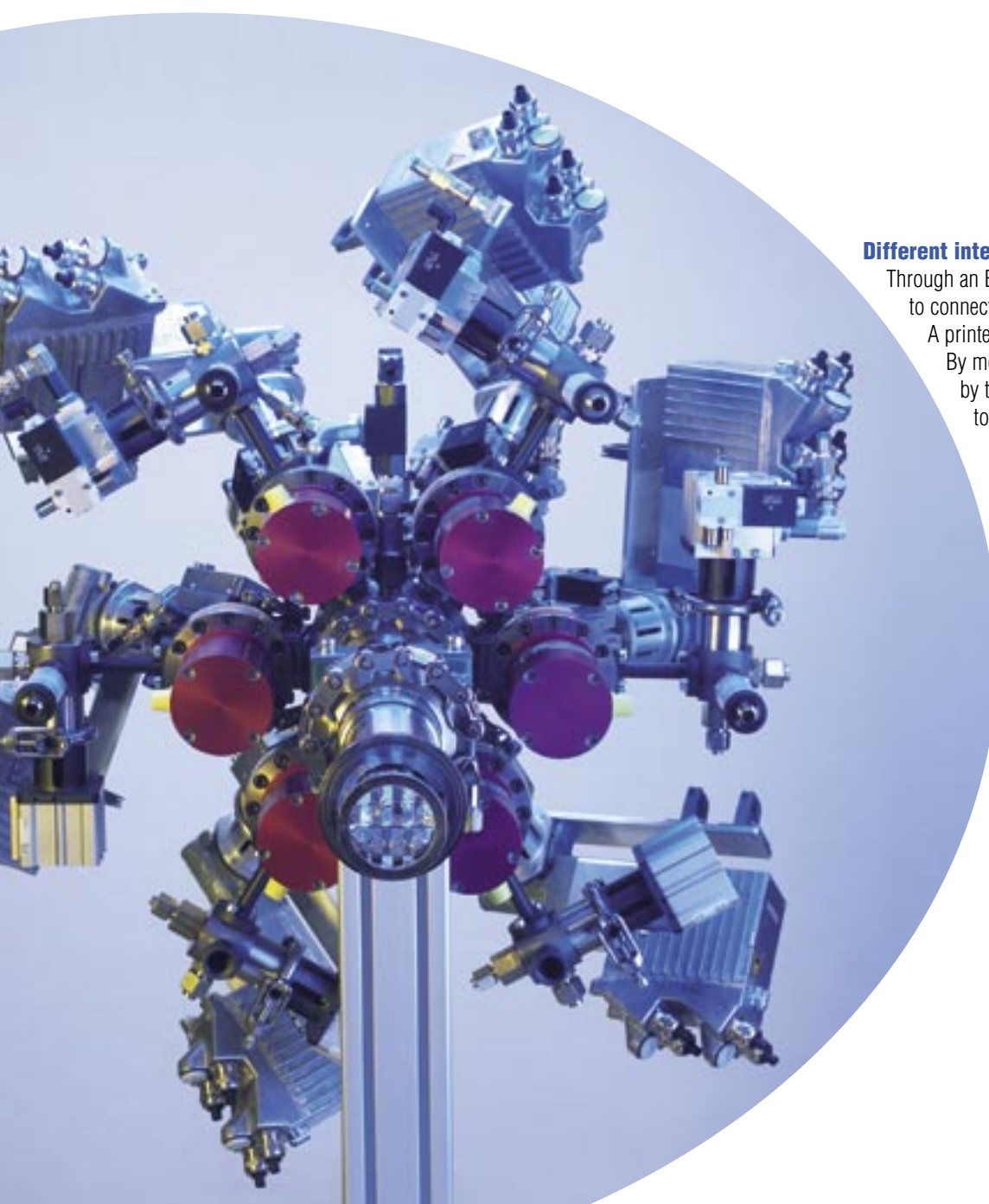


SD-XK / XKV Dosing system for in-line mixing

The brain of the XKV

The control system is based on a Siemens PLC S7-300 with a 10" touch screen. The user-friendliness is very important for **Schwerdtel**. Special attention was paid to an easy menu interface and menu structure as well as to the possibility to define access authorisation.

The self-learning-function: The different machine parameters, related to the respective product to be filled, optimize themselves during the production. These data are stored to the corresponding recipe and are available when the recipe is recalled the next time. Thus, after the learning phase, the machine immediately starts again in the optimum range of performance.



Different interfaces can be considered:

Through an Ethernet interface it is possible to connect the machine to a network.

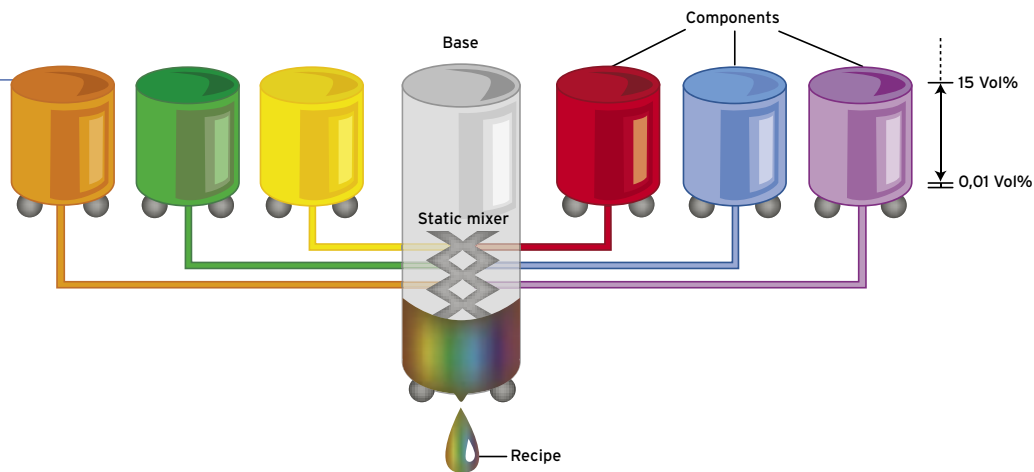
A printer connection is integrated.

By modem and a telephone line provided by the customer, it is also possible to carry out a remote diagnostics.

The storage of the recipes

is done through a memory card which can store hundreds of recipes.

Also fault diagnostics data can be stored.

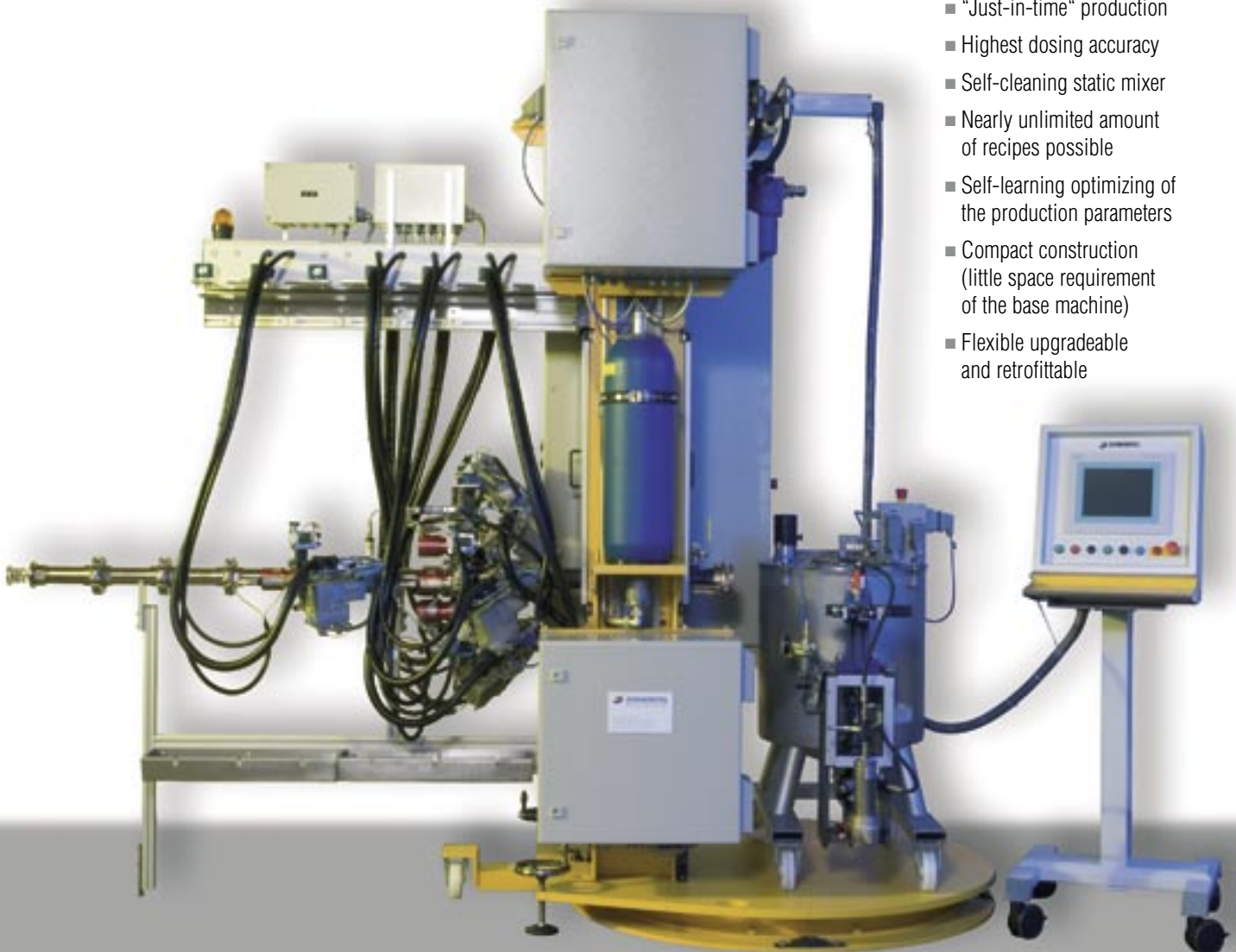


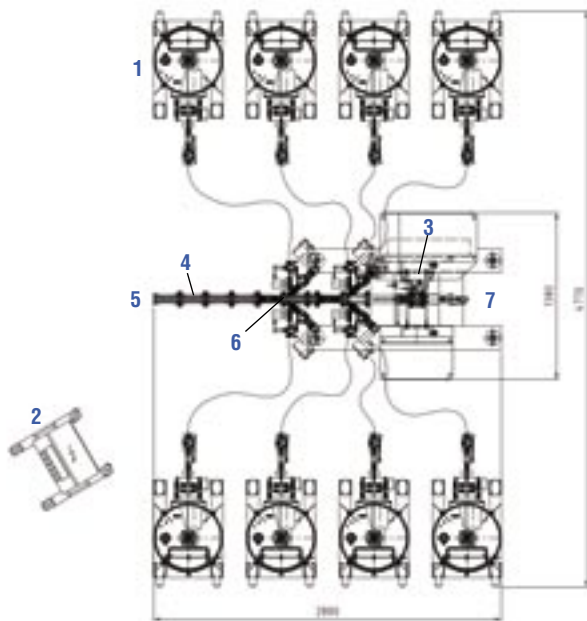
Universality: Due to the infinitely variable dosing range (minimum dosing quantity of a single component 0,01 Vol%) and the high dosing accuracy, nearly an infinity of different mixtures can be produced from the base component and the additive components.

The XKV - The Star

The advantages at a glance:

- Production flexibility by connection of the same machine to different filling systems
- "Just-in-time" production
- Highest dosing accuracy
- Self-cleaning static mixer
- Nearly unlimited amount of recipes possible
- Self-learning optimizing of the production parameters
- Compact construction (little space requirement of the base machine)
- Flexible upgradeable and retrofittable





- 1 Supply unit
- 2 Operator panel
- 3 Dosing unit
- 4 Static mixer stretch
- 5 Product outlet
- 6 Second mixing chamber
- 7 Product infeed

Flexibles upgrading possible:

- ✓ **SD-XK / version with one mixing chamber as basic machine**
- ✓ **Second mixing chamber (up to 12 additive components) retrofittable**
- ✓ **Upgrading to SD-XKV possible**
- ✓ **Combination of XK and XKV functions possible**
- ✓ **Connectable to cartridge filler, sausage filler and other filling systems**

Technical Data

Machine Type	SD-XK / XKV
Measurements (L x W x H)	approx. 2890 x 1380 x 2800mm
Weight	approx. 1450 kg
Output	up to 30 cart./min. (depending on product)
Drive of dosing unit	hydraulic
Dosing range	up to 650ml
Product inlet	1060 ±50mm
Electrical data	
Main voltage	400V, 50Hz or according to local requirements
Power input	approx. 3kW
Control	Siemens S7 PLC
Protection system	IP 44
Compressed air connection	
Air pressure	min. 5,0bar
Air consumption	approx. 160-210Nm³/h
Hydraulic	
Measurements (L x W x H)	1150 x 830 x 1210mm
Weight	550 kg
Max. hydraulic pressure	200 bar
Oil requirement	250l