

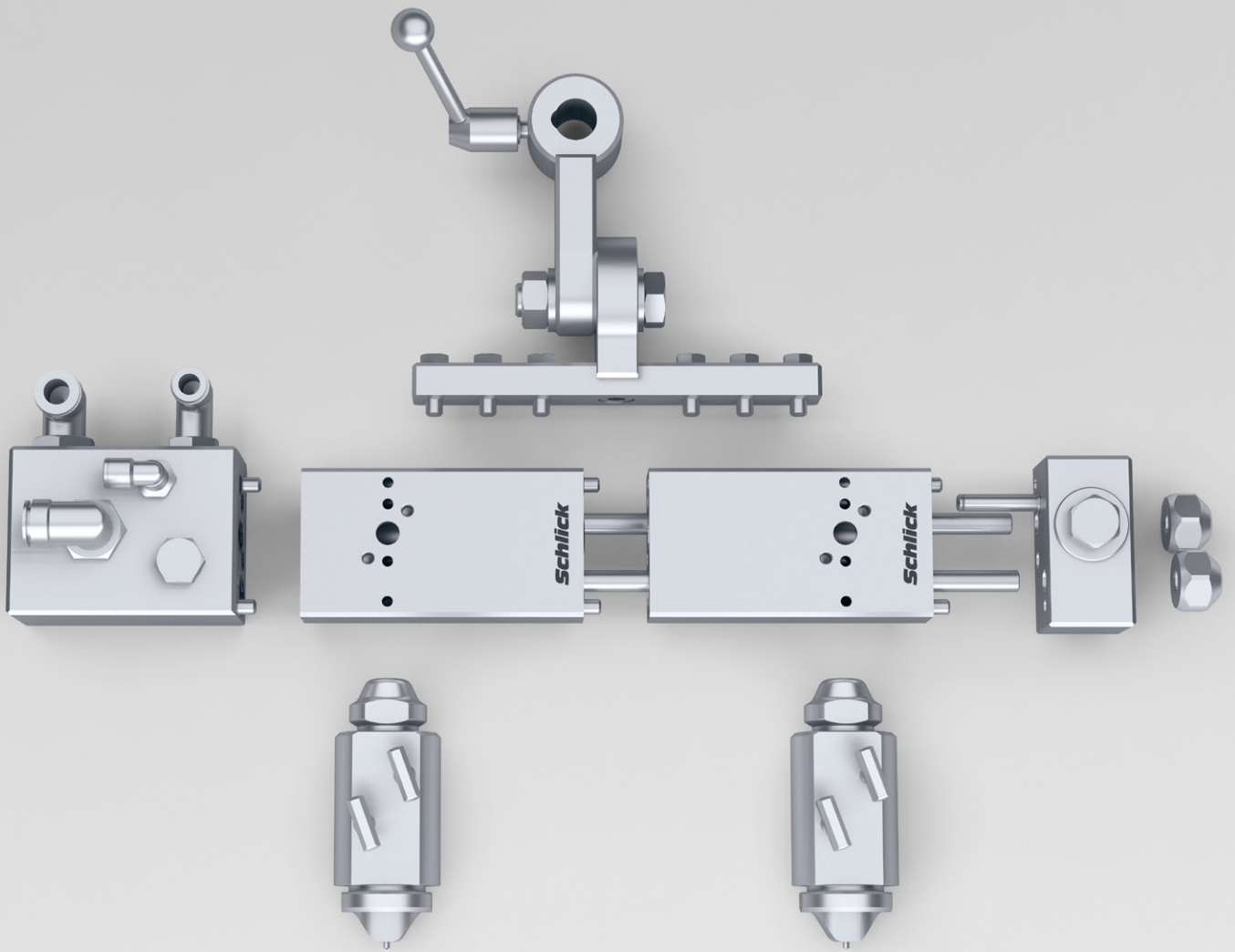
Living for Solutions:
SCHLICK Professional Coating Arm (PCA)



Requirements for spraying technology.

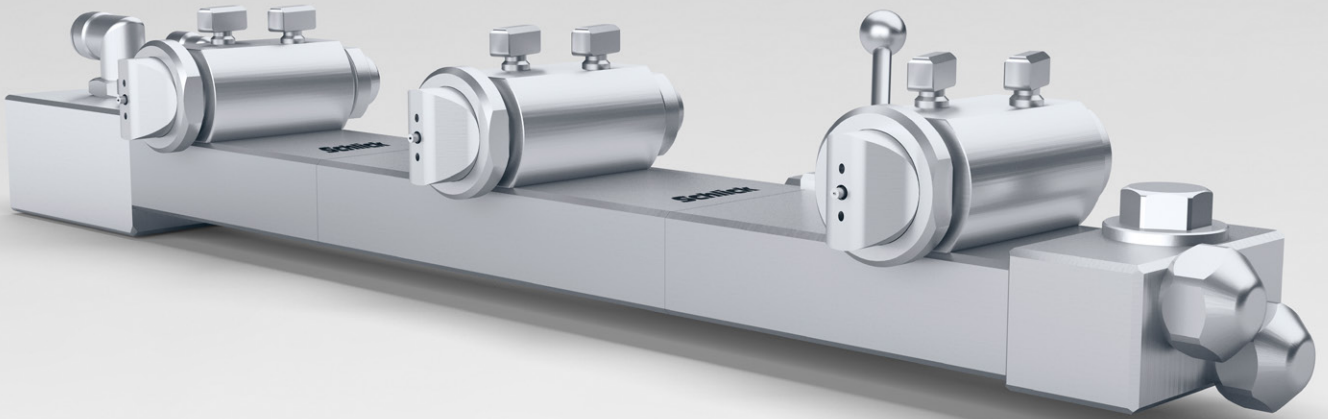
Spray results must be precise and reproducible; maintenance and cleaning work must be simple and time-saving. The bar is set high, particularly when it comes to challenging applications such as (tablet) coating or sugar coating. Coating arms with several individual nozzles, which are supplied via individual hoses to create a uniform spraying pattern, are still often used here. This technical solution, however, is prone to errors. It requires a lot of manual work and time to achieve settings for reproducible results and to carry out the necessary cleaning work.





Living for Solutions.

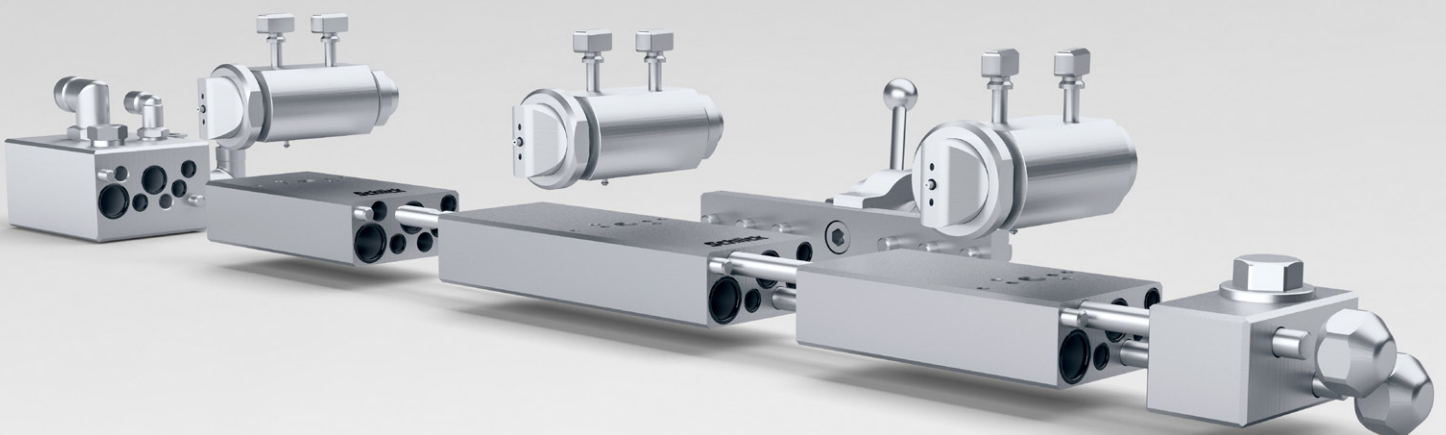
SCHLICK, on the other hand, uses its own spray arm, the Professional Coating Arm (PCA). It consists of individual blocks that can be easily linked, each with one nozzle. Through clearly defined block dimensions, assembly-related spacing or alignment errors between the nozzles are excluded, reducing the assembly times enormously. The system operates according to the 'manifold' principle – all nozzles are supplied evenly via a common distribution system, thus ensuring reproducible spray results can be achieved on an ongoing basis. No additional hoses or fittings are required in the coater. The intelligent product design of the SCHLICK PCA therefore meets all requirements.



The SCHLICK PCA is equipped with SCHLICK ABC technology as standard. The individual nozzles can be disassembled/ assembled quickly and simply.

The modular construction system allows the variable use of two to thirteen nozzles. The arm is supplied via individually adapted attachments for control air, atomising air, pattern air and liquid (with flow and return). Dirty corners are kept to a minimum. SCHLICK will also supply a customised attachment mechanism to meet the system requirements. The use of titanium elements also means that the weight is drastically reduced.

The GMP design of the nozzles themselves also facilitates very quick assembly/disassembly for cleaning or servicing by hand.



Anti-Bearding Technology.

The Professional Coating Arm was specially developed for coating applications and is equipped with SCHLICK Anti-Bearding Technology as standard. It provides optimal operating safety in the coating plant. The rounded shape of the 'Anti-Bearding Cap' (ABC) significantly reduces turbulence around the air cap and nozzle orifice. Dust particles circulating around the coater, for example from tablet debris, do not build up on the nozzle. In this way, deposits, caking, bearding and blockages of the nozzle orifice are almost entirely eliminated.

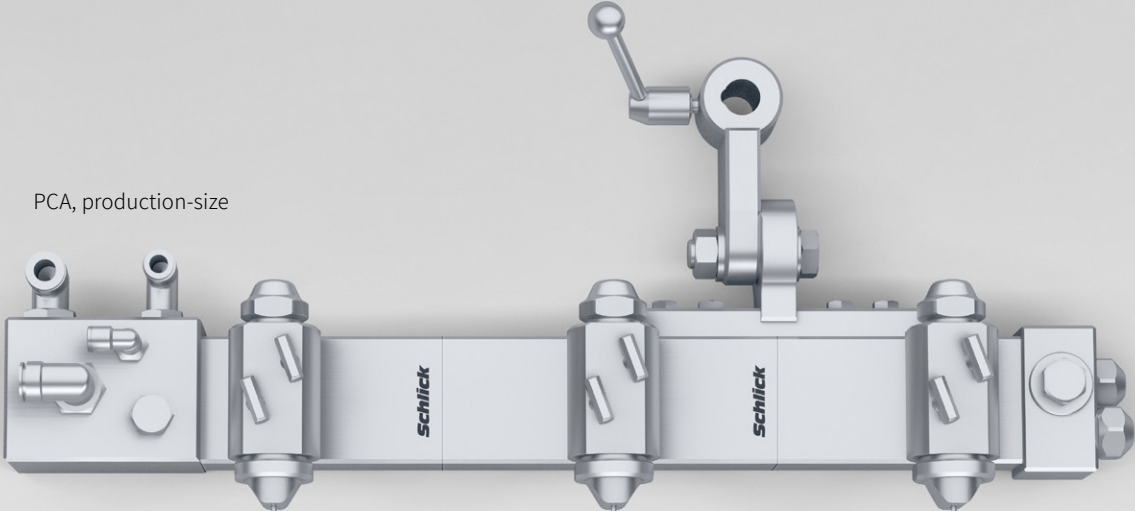


This means that the air ducts remain free and produce a consistent spraying pattern. This almost entirely eliminates interruptions in the coating process caused by cleaning work on the nozzle. The ABC spray produces a consistent and homogeneous distribution of liquid with a very fine, even and reproducible droplet size distribution, and is notable for its uniform ellipse.

Perfect upscaling.

Depending on the application, customers can choose from a selection of PCA designs, ranging from nano to production-size. SCHLICK provides ABC nozzles for all performance ranges; from tabletop units to laboratory systems through to production systems. Thus, the ABC product range covers a capacity of 1–180 g/min (coating) with continuous use. This results in perfect upscaling of the production parameters. According to the performance ranges, PCA designs, ranging from nano-size to production-size, are available with the respective ABC product range.

PCA, production-size



PCA, lab-size



PCA, nano-size



Performance across all applications

The performance parameters of the PCA nozzles mounted on the Professional Coating Arm are identical to those of the ABC individual nozzles of the respective product range. This enables coverage for all relevant batch sizes. The PCA nozzles have been structurally adapted to ensure simple and safe assembly/disassembly on the PCA.



| Category | PCA, nano-size | PCA, lab-size | PCA, production-size |
|------------------------------|--|--------------------------|---------------------------|
| Model | 951 S24 NANO ABC | 970 S89 ABC | 930 S37 ABC |
| Spray pattern | Oval flat spray | | |
| Spray angle | approx. 60° | | |
| Capacity (single nozzle) | 1 – 10 g/min | 5 – 60 g/min | 30 – 180 g/min |
| Standard orifices | 0.5 mm | 0.5 – 1.2 mm | 0.5 – 2.2 mm |
| Control | Separate control for pattern air (PA) and atomising air (AA) | | |
| Number of nozzles (standard) | 2 – 5 | 2 – 8 | 2 – 13 |
| Setting | SCHLICK Anti-Bearding Cap (ABC), cleaning needle, with liquid return system | | |
| Features | Atomising smallest quantities, air cap attached with special stop position | | |
| | ATEX version for PCA nozzles also available | | |
| Mounting | Assembly using two screws | Assembly using one screw | Assembly using two screws |
| Applications | (Tablet) coating, coating | | |
| Material | Materials which conform to FDA: 1.4404 (AISI 316 L), with surface quality of Ra < 0.8 (other materials on request) | | |

Benefits of SCHLICK PCAs at a glance

Customised.

Customer-specific designs for all pharmaceutical/food applications.

Convenient.

The PCA connection is individually adapted to the coater.

Practical.

Simple assembly/disassembly for cleaning or servicing by hand.

Safe.

The modular construction system eliminates errors of direction and alignment.

Sophisticated.

No processing risks due to supply hoses or fittings.

Perfect.

SCHLICK ABC technology ensures homogeneous spray behaviour.

Functional.

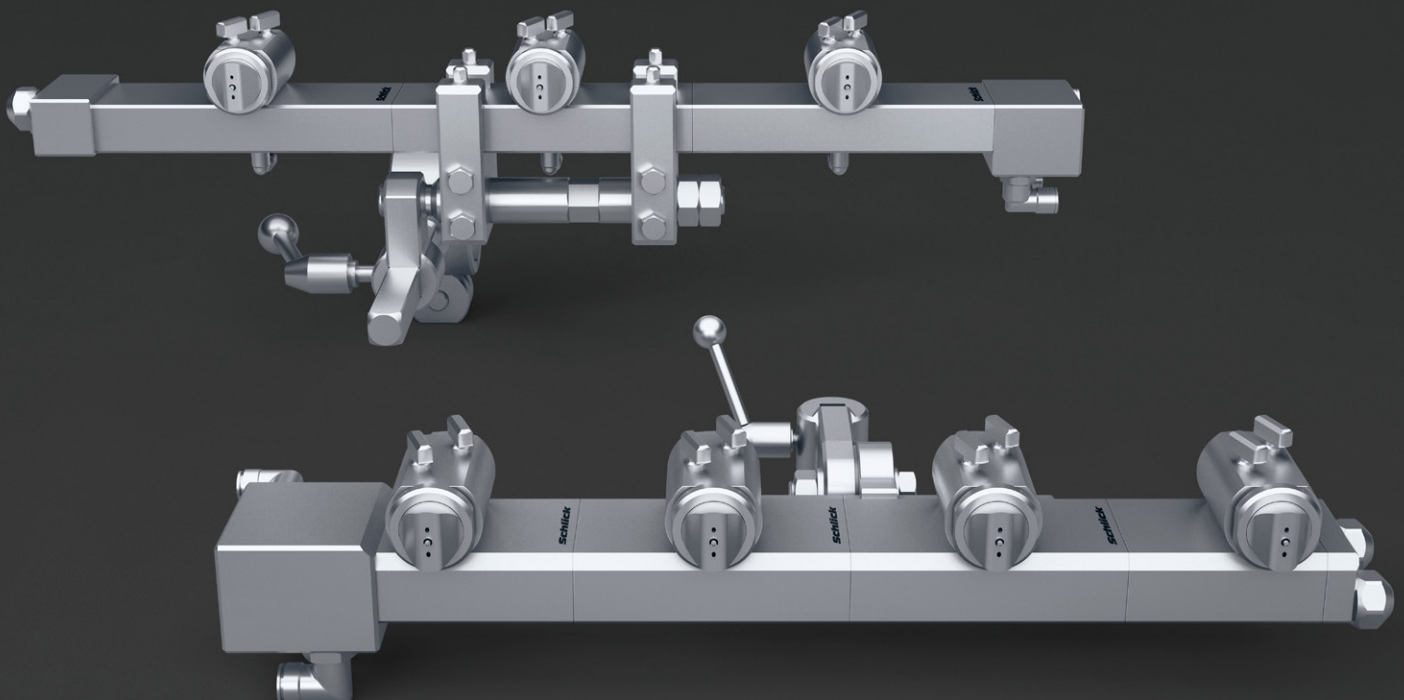
No bothersome conventional hose feed lines.

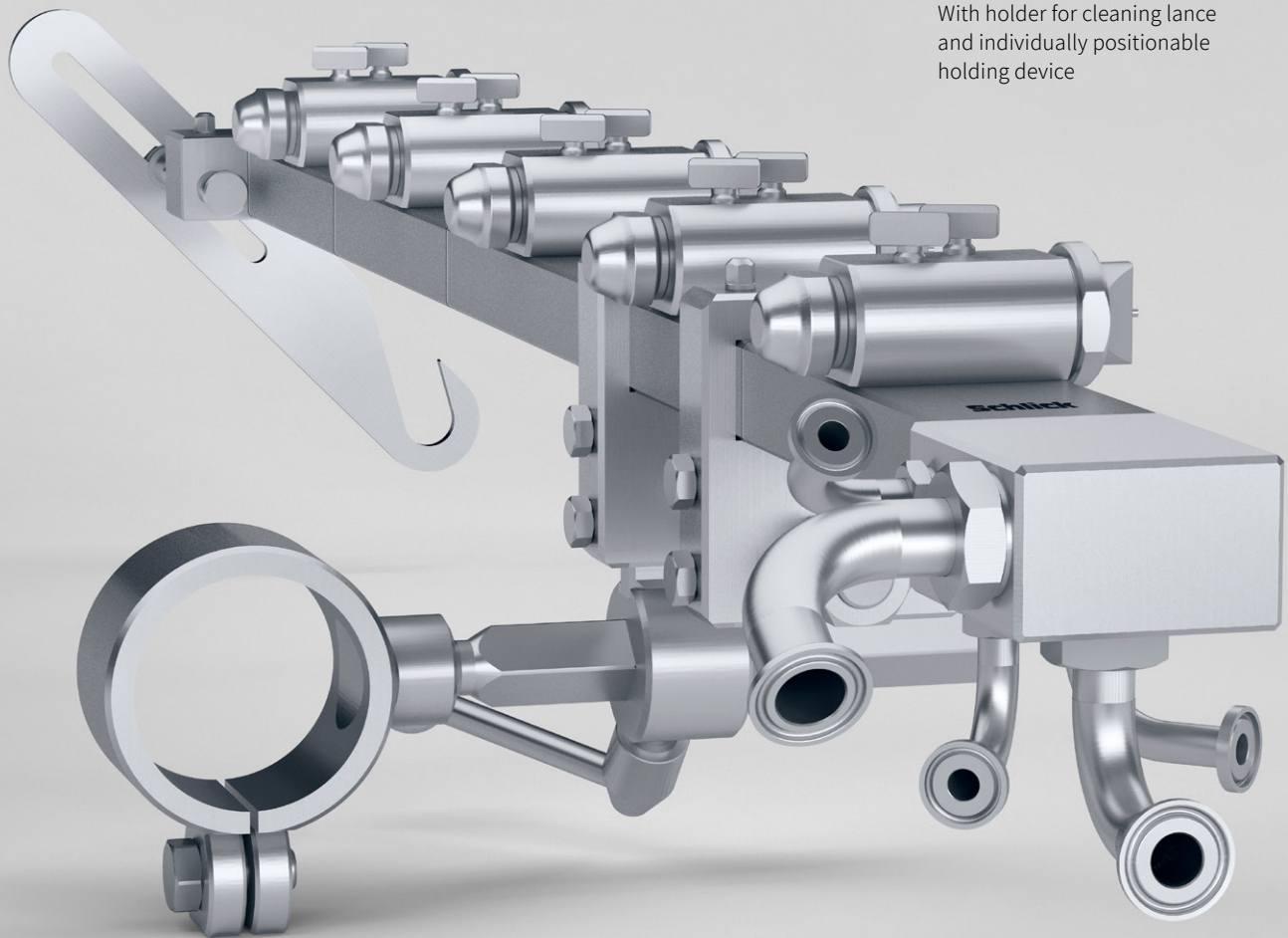
Effective.

The modular construction system minimises servicing/assembly/cleaning work.

Precise.

Individual PCA design according to customer specifications and requirements.





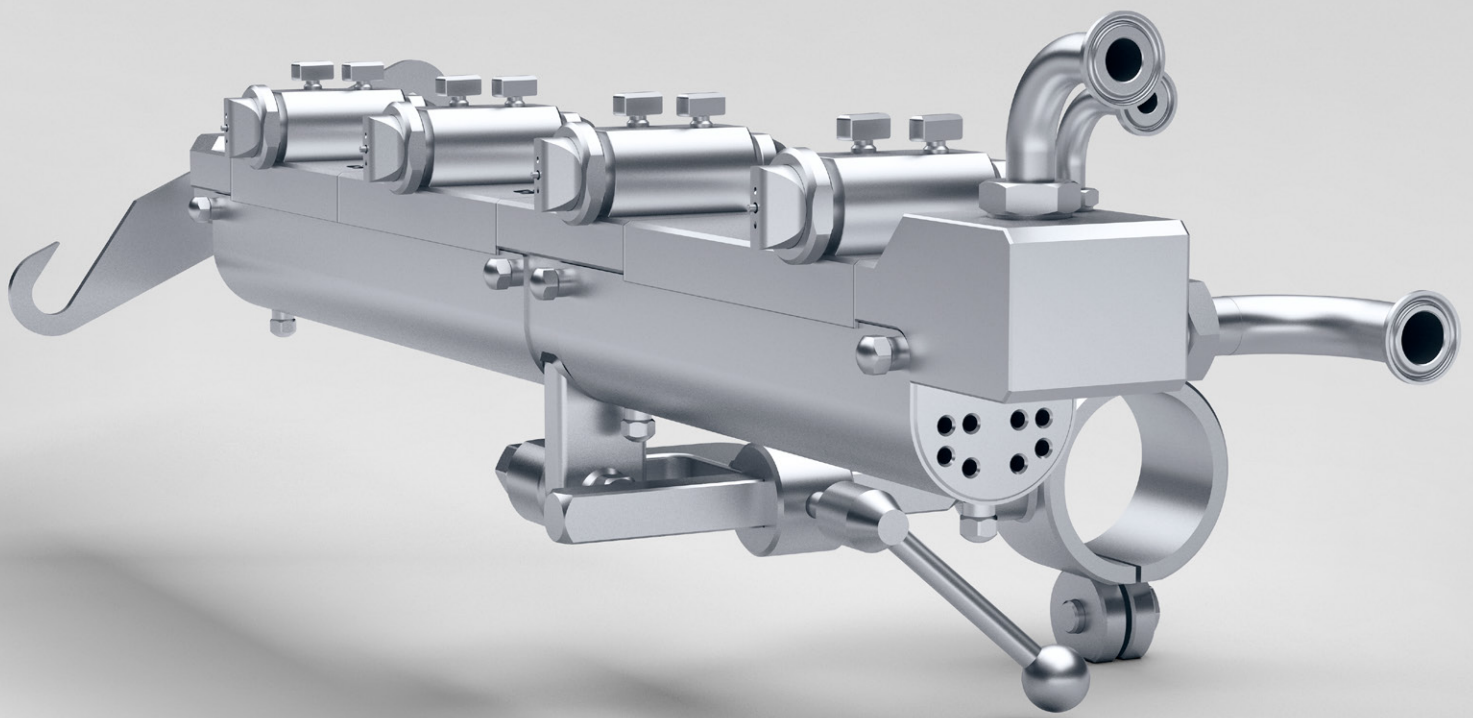
With holder for cleaning lance
and individually positionable
holding device

Custom variations and individual designs.

Many of our customers demand custom solutions and bespoke adjustments, which can only be achieved through close consultation with expert advisers and engineers. Whether this requires sliding holders or a separate supply of liquid to individual nozzles is irrelevant to SCHLICK. No matter what their requirements, our customers rightly trust in our expertise. With our fast and flexible approach, we will work to find a solution that meets your exact requirements and develop innovative technologies to realise your goals. According to the motto: Your application. Our nozzle.

Protected.

Sometimes it's just little things that require special design solutions. For example, a change in temperature in the production environment may necessitate special protection of liquid supply lines. It's great when experienced designers develop the right protective device for this and thus ensure the perfect functioning of your Professional Coating Arm.

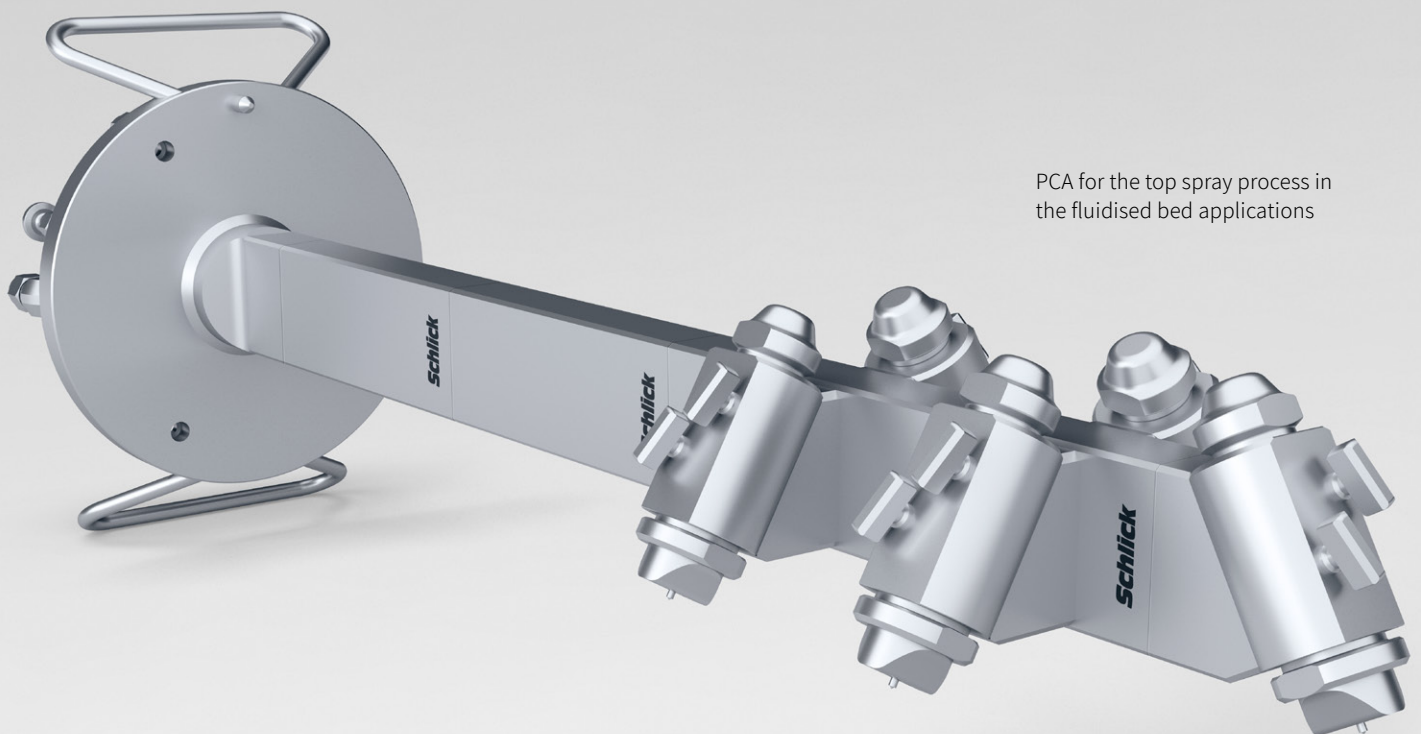


Separate supply of the nozzles with protection of the liquid supply line

Production-safe.

Blocked spray nozzles are still a widespread problem in fluidised bed systems in which very fine or tacky products are processed. The advantages of PCA technology in combination with ABC nozzles prevent unplanned downtimes. In production practice, this means a noticeable increase in production reliability as well as greatly simplified, tool-free operation.

Fluidised bed applications often use the top spray process. Thanks to their design solutions, SCHLICK PCAs ensure a fine and homogeneous spray.



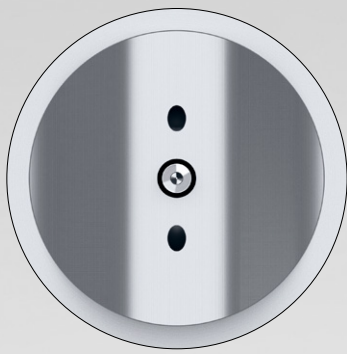
PCA for the top spray process in the fluidised bed applications

Application-related.

Each application has its own special requirements for PCA configuration. This also applies, for example, to sugar coating, which is often used in the food and pharmaceutical industries. Sugar solutions or chocolate are mainly used in the spraying process. The important factor here is that the result is an even and compact layer. For a quick modification of the PCA, film coating nozzles can be exchanged for nozzles for coating sugar or chocolate without any special tools.

SCHLICK systems provide the ideal spraying technology even for challenging media.

ABC nozzle for ultra-fine (tablet) coating

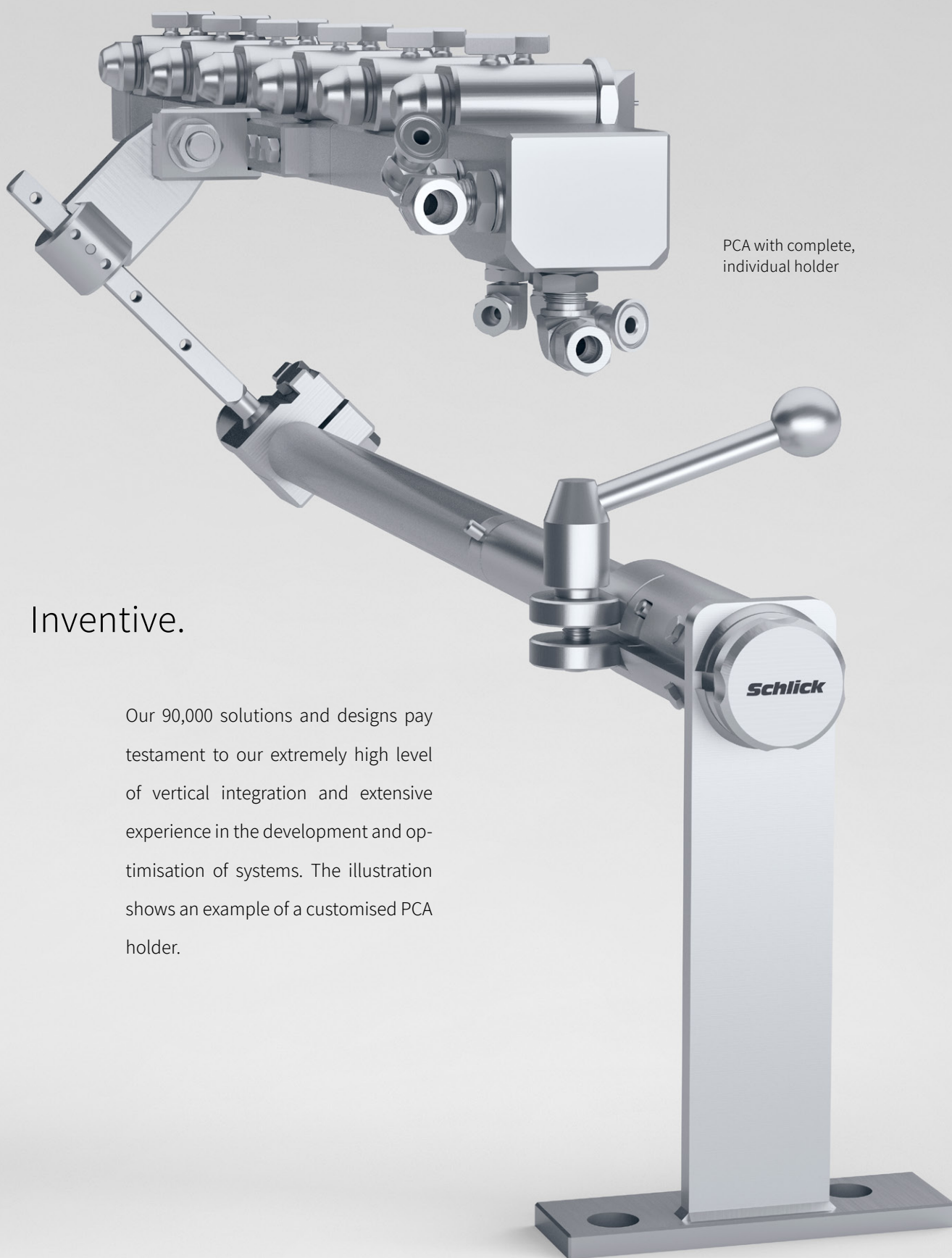


Flat jet pressure nozzle especially for sugar coating



Two-substance nozzle designed for chocolate applications





PCA with complete, individual holder

Inventive.

Our 90,000 solutions and designs pay testament to our extremely high level of vertical integration and extensive experience in the development and optimisation of systems. The illustration shows an example of a customised PCA holder.

Your application. Our nozzle.
Our promise: Living for solutions.

Consultation, engineering, production and testing.

At SCHLICK, you get everything from one source.

The ideal solution for your application.

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Subject to technical alterations . 09.2022



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