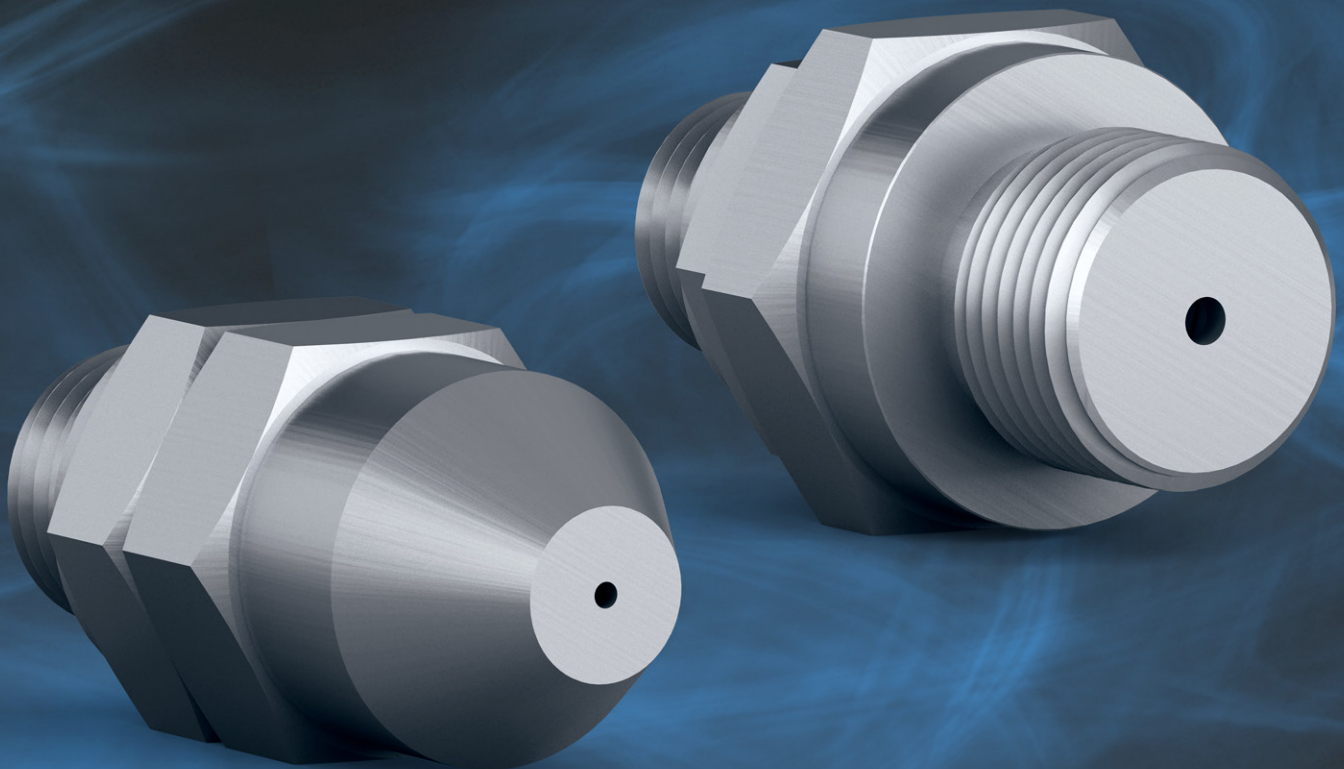


Living for Solutions:  
Model 586. Perfect for hot conditions.



# Distinctive.

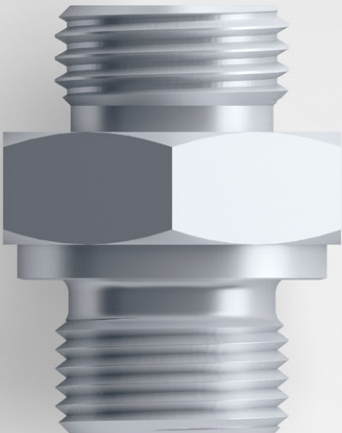
In the SCHLICK hollow-cone nozzles, the liquid flows tangentially into the swirl chamber of the nozzle head, which causes it to rotate. During this process, the energy in the pressurised liquid is converted into rotational or kinetic energy. A rotating film of liquid forms around an air core.



Nozzle head



Swirl insert



Screw fitting

# Precise.

At the exit of the nozzle the liquid film encounters the surrounding air in a reciprocal reaction and breaks up into fine droplets. These move away from the nozzle in an axial and radial direction and form a hollow cone. The quality of the atomised spray and the droplet spectrum depend on the bore diameter, the pressure difference, the spray angle, the density, the viscosity and the surface tension.

**Atomisation:**

Circular hollow-cone

**Spray angle:**

30°, 45°, 60°, 75°, 90°, 120°

**Capacity:**

0.47 – 47 l/min at 3 bar

**Bore diameters:**

1.1 mm – 11 mm

**Feature:**

With a movable swirl chamber  
(non-return valve function)

# Versatile.

The SCHLICK model 586 is produced in four different sizes. This means that capacity and drop size can easily be adjusted to the individual requirements. The spray results are completely even. The nozzle boasts a very broad performance spectrum and is extremely robust. The 586K version of the standard model is also available with head screw thread for screwing into containers, flanges or tubes. The hollow-cone nozzle is equipped with a movable swirl chamber, which acts as a non-return valve when counter-pressure is applied. The model can be supplied as a full-cone nozzle on request.



586 size 1



586 size 2



586 size 3



586 size 4



586K size 1



586K size 2

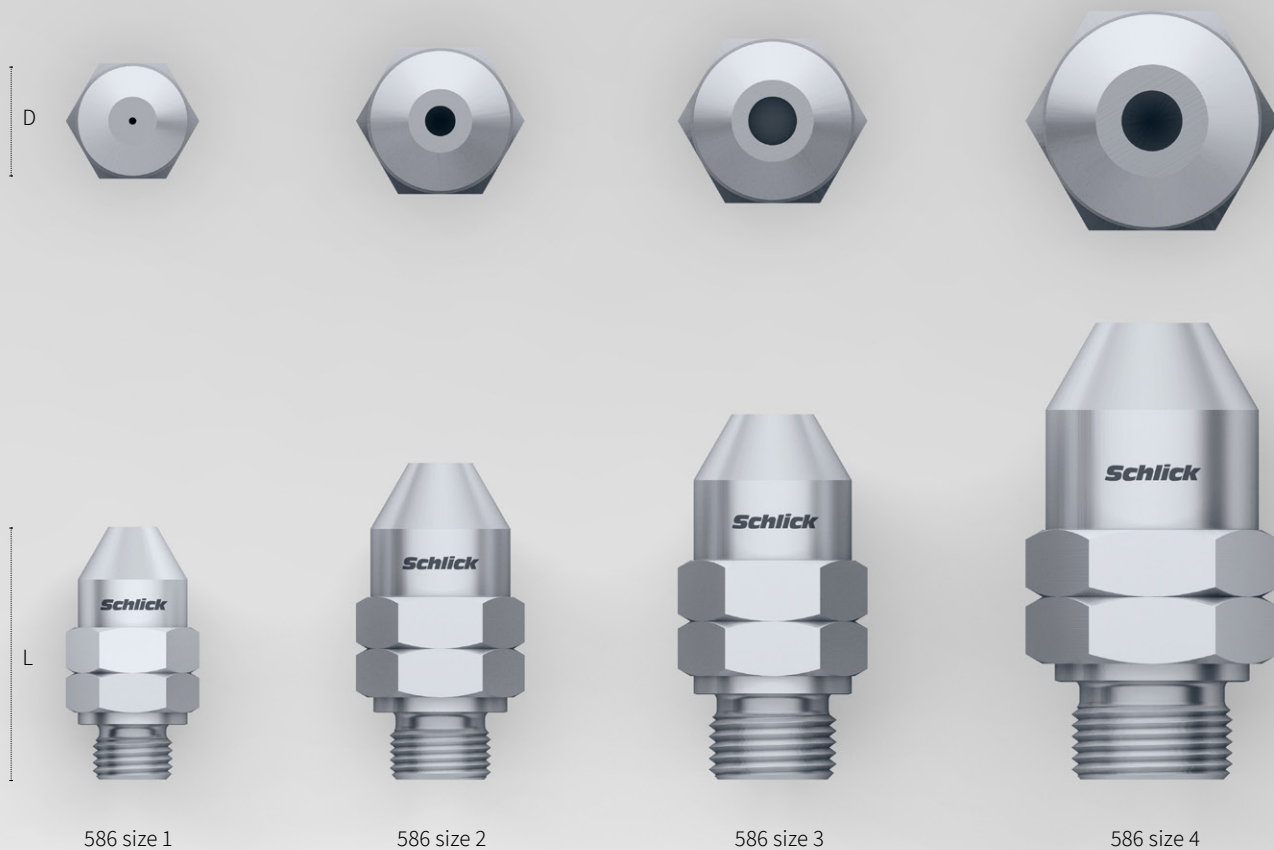


586K size 3



586K size 4

# Sophisticated.



Size	Thread G [DIN ISO 228]	Bore hole [ø in mm]	Total length [L in mm]*	Diameter [D in mm]	Width across flats [AF]
1	1/4	1.1 to 4.8	41	18	19
2	3/8	5.0 to 6.0	52	23	24
3	1/2	7.0 to 8.0	60	26	27
4	3/4	10.0 to 11.0	75	35	36

\* Applies for spray angle of approx. 70°

**Application areas:** Moistening, gas cooling, gas washing/cleaning, superheated steam cooling, cooling

**Materials:** Stainless steel 1.4541, other materials available on request.

## The benefits at a glance

### **Precise.**

Completely even and reproducible spray results.

### **Convenient.**

Wide range of sizes, bore diameters and spray angles.

### **Versatile.**

A wide range of applications and uses.

### **Straightforward.**

Hassle-free and simple assembly/dismantling and cleaning.

### **Reliable.**

With a movable swirl chamber (non-return valve function).

### **Original.**

Consultation, engineering, production and testing from SCHLICK.

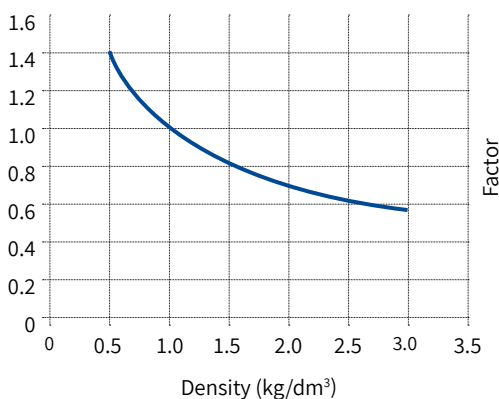


**Schlick**

# Performance data.

Size	1											2			3		4	
G [DIN ISO 228]	1/4											3/8			1/2		3/4	
Theoretical nominal bore [mm]*																		
$\Delta p$		1.1	1.6	2.3	2.8	3.2	3.6	3.9	4.2	4.5	4.8	5	5.5	6	7	8	10	11
1 bar	l/min	0.27	0.58	1.19	1.76	2.30	2.92	3.40	3.98	4.55	5.20	5.60	6.80	8.10	11.00	14.40	22.50	27.20
2 bar	l/min	0.38	0.81	1.68	2.48	3.26	4.12	4.80	5.63	6.45	7.35	7.95	9.65	11.40	15.60	20.40	31.80	38.40
Test pressure 3 bar	l/min	0.47	1.00	2.06	3.05	4.00	5.05	5.90	6.90	7.90	9.00	9.75	11.80	14.00	19.10	25.00	39.00	47.00
4 bar	l/min	0.54	1.16	2.38	3.52	4.62	5.83	6.82	7.95	9.10	10.40	11.13	13.60	16.20	22.00	28.80	45.00	54.50
6 bar	l/min	0.66	1.43	2.92	4.32	5.65	7.20	8.35	9.75	11.20	12.75	13.80	16.70	19.80	27.00	35.40	55.20	66.50
8 bar	l/min	0.77	1.64	3.37	4.98	6.52	8.30	9.63	11.30	12.90	14.70	15.90	19.25	22.80	31.20	40.80	63.70	77.00
10 bar	l/min	0.86	1.83	3.76	5.57	7.30	9.25	10.75	12.60	14.40	16.50	17.80	21.50	25.80	34.80	45.70	71.50	86.00
12 bar	l/min	0.94	1.99	4.13	6.10	8.00	10.15	11.90	13.80	15.85	18.00	19.50	23.70	28.20	38.40	50.00	78.40	94.60
14 bar	l/min	1.02	2.15	4.45	6.60	8.65	10.90	12.85	14.90	17.10	19.40	21.20	25.60	30.50	41.50	54.00	84.60	102.00
16 bar	l/min	1.09	2.30	4.76	7.05	9.25	11.70	13.70	16.00	18.30	20.80	22.55	27.40	32.60	44.30	57.60	90.50	109.00
18 bar	l/min	1.16	2.44	5.05	7.46	9.80	12.40	14.60	16.90	19.40	22.20	23.90	29.00	34.60	47.00	61.25	96.00	116.00
20 bar	l/min	1.22	2.57	5.33	7.87	10.32	13.10	15.35	17.80	20.50	23.25	25.20	30.60	36.40	49.60	64.50	101.00	122.00
22 bar	l/min	1.28	2.70	5.60	8.25	10.82	13.75	16.10	18.70	21.45	24.40	26.40	32.10	38.20	52.00	67.80	106.00	128.00
24 bar	l/min	1.34	2.82	5.84	8.62	11.30	14.35	16.80	19.55	22.40	25.45	27.60	33.60	40.00	54.40	70.70	111.00	134.00
26 bar	l/min	1.39	2.93	6.07	8.97	11.80	14.90	17.50	20.35	23.35	26.50	28.70	34.90	41.60	56.50	74.60	115.30	139.00
28 bar	l/min	1.45	3.04	6.30	9.31	12.20	15.50	18.20	21.10	24.20	27.50	29.80	36.20	43.20	58.60	76.50	120.00	145.00
30 bar	l/min	1.50	3.15	6.53	9.65	12.65	16.05	18.80	21.80	25.20	28.45	30.80	37.50	44.65	60.80	79.20	124.00	150.00

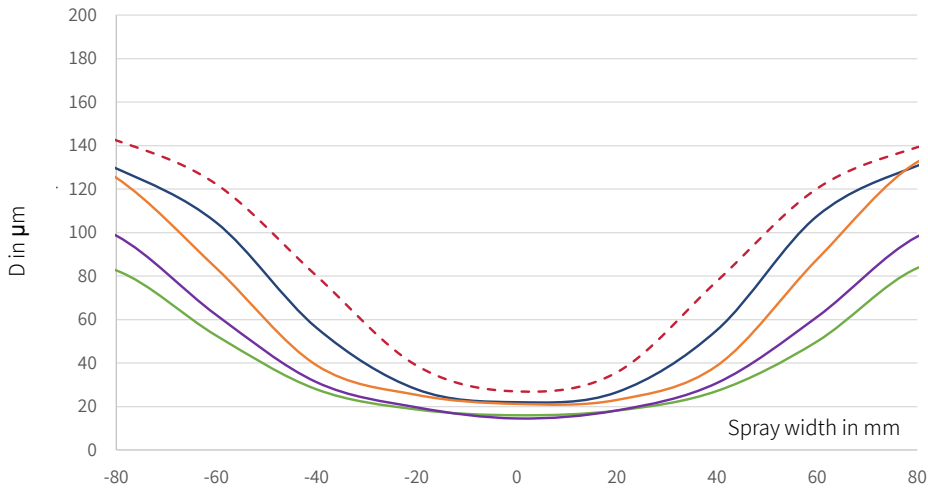
\* Applies for spray angle of approx. 70°. For technical reasons, nozzles with different spray angles must be fitted with smaller or larger bore openings. However, each air flow rate corresponds to the theoretical nominal bore. This is specified on the nozzles in 1/10 mm.



### Flow rate in relation to water at 16°C

Liquids with a different density can be calculated using the conversion table opposite.

### Drop size

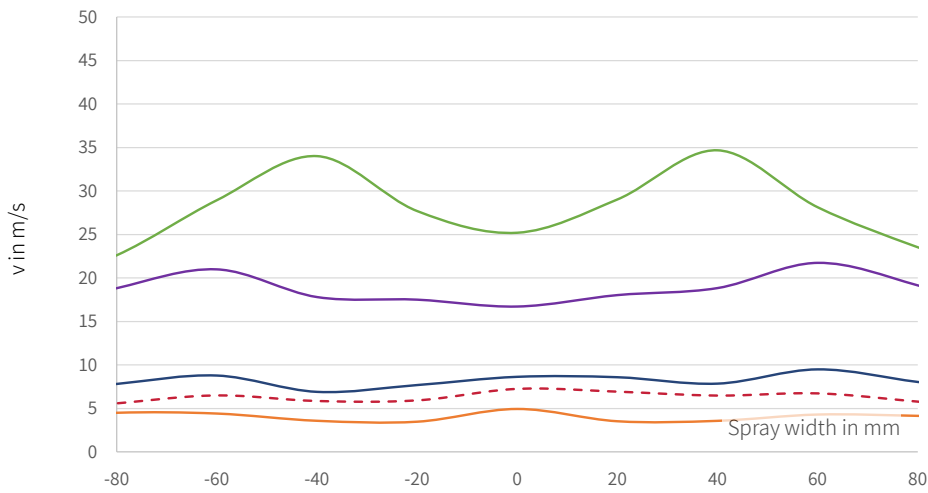


All information relates to model 586 in the following configuration:

**Bore diameter of 2.8 mm**  
**Normal spray angle: approx. 70°-78°**  
**Spray width: 160 mm**  
**Measuring distance: 100 mm**

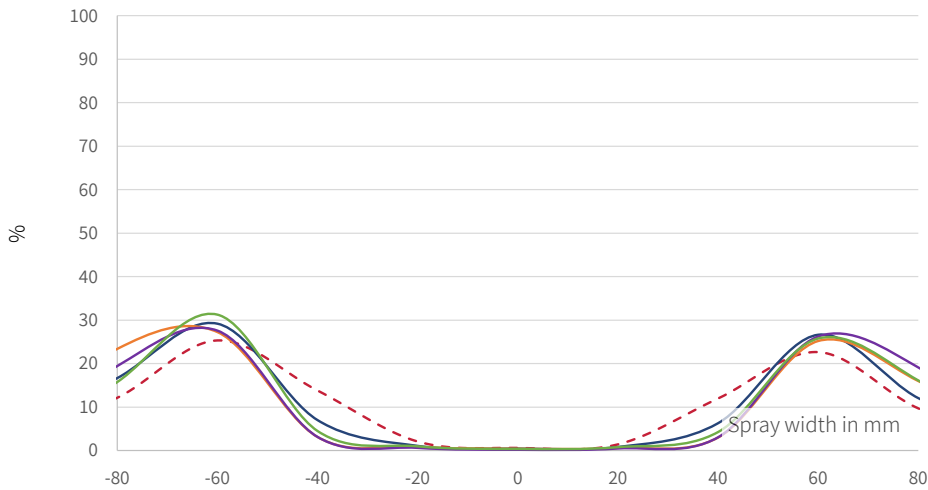
- 3 bar
- 5 bar
- 10 bar
- 20 bar
- 50 bar

### Drop speed



- 3 bar
- 5 bar
- 10 bar
- 20 bar
- 50 bar

### Flow rate density



- 3 bar
- 5 bar
- 10 bar
- 20 bar
- 50 bar



## Droplet size distribution

The graphic shows the typical droplet size distribution of hollow-cone nozzles. Measurements have been taken for the middle, the centre of the nozzle and six rings, each 10 mm from each other and at a 30° angle increment.

### Operating conditions

(Water, reference liquid):

Bore diameter: 2.8 mm

Spray angle: 75°

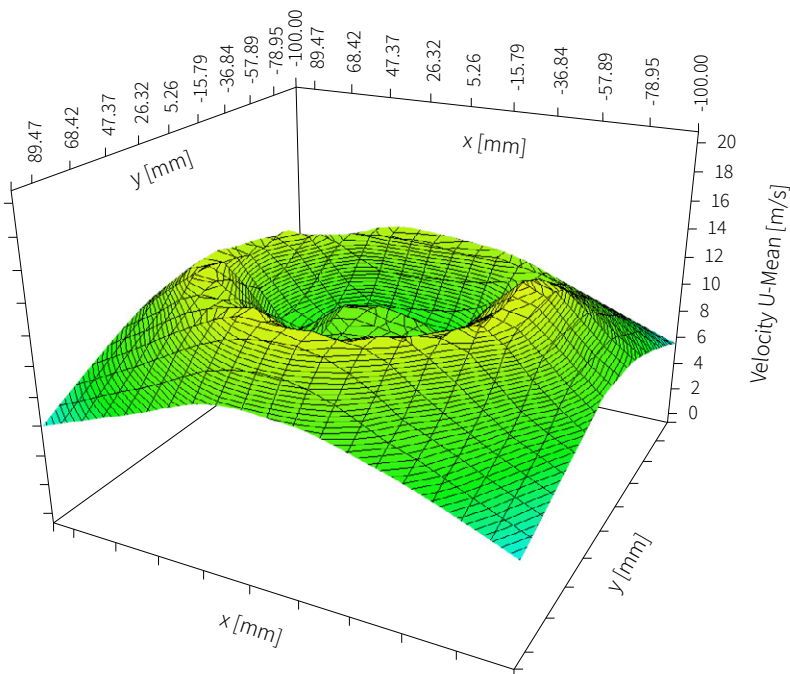
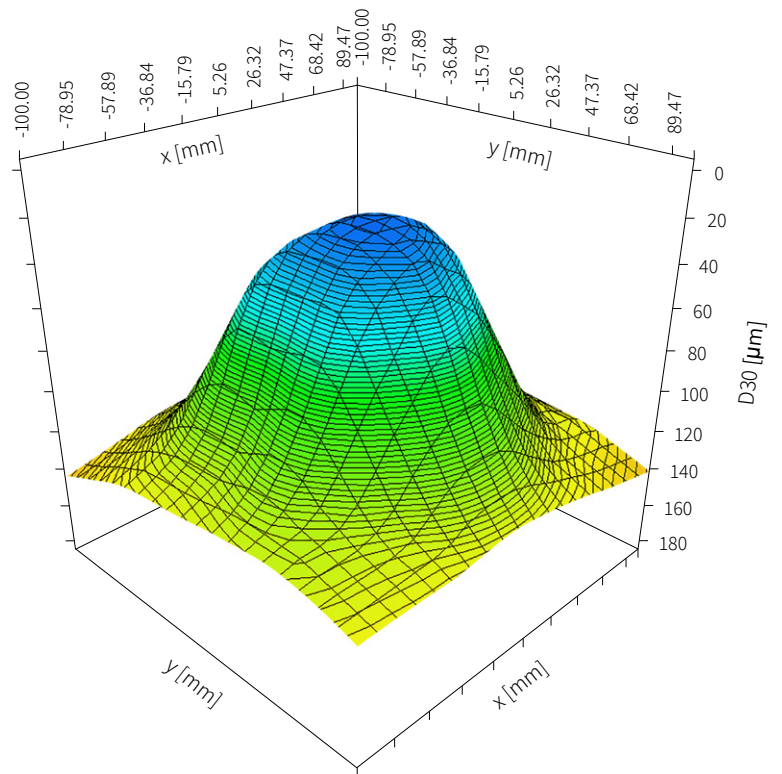
Distance to measuring volume: 100 mm

Measuring points: 131

Angle increment: 30°

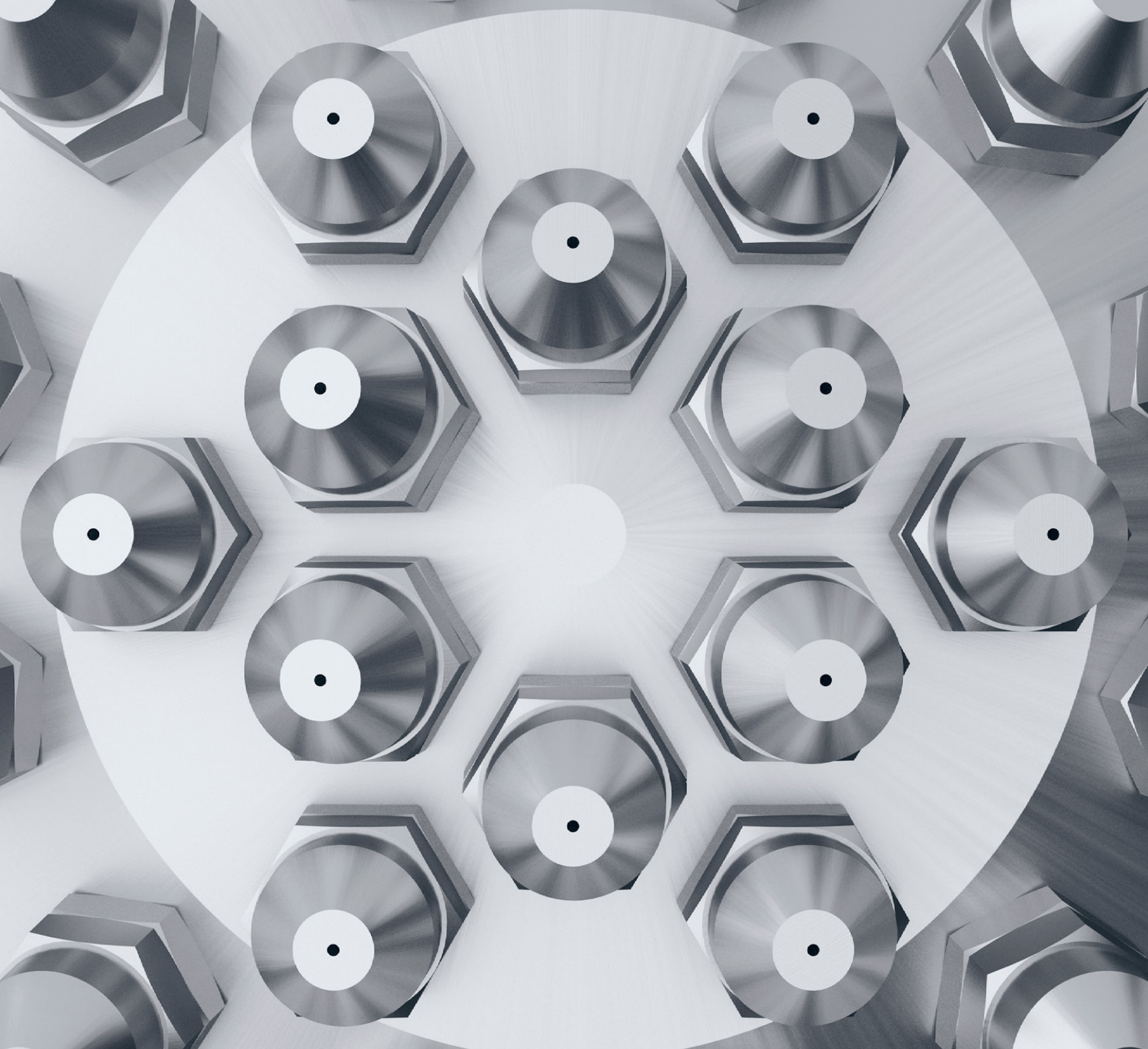
Increment: 10 mm

Pressure: 10 bar



## Speed distribution

The speed distribution displays a crater shape, which is produced due to the spray principle of the hollow-cone nozzle. However, there are drops inside the scatter cone due to the negative pressure, although these are at a lower speed.

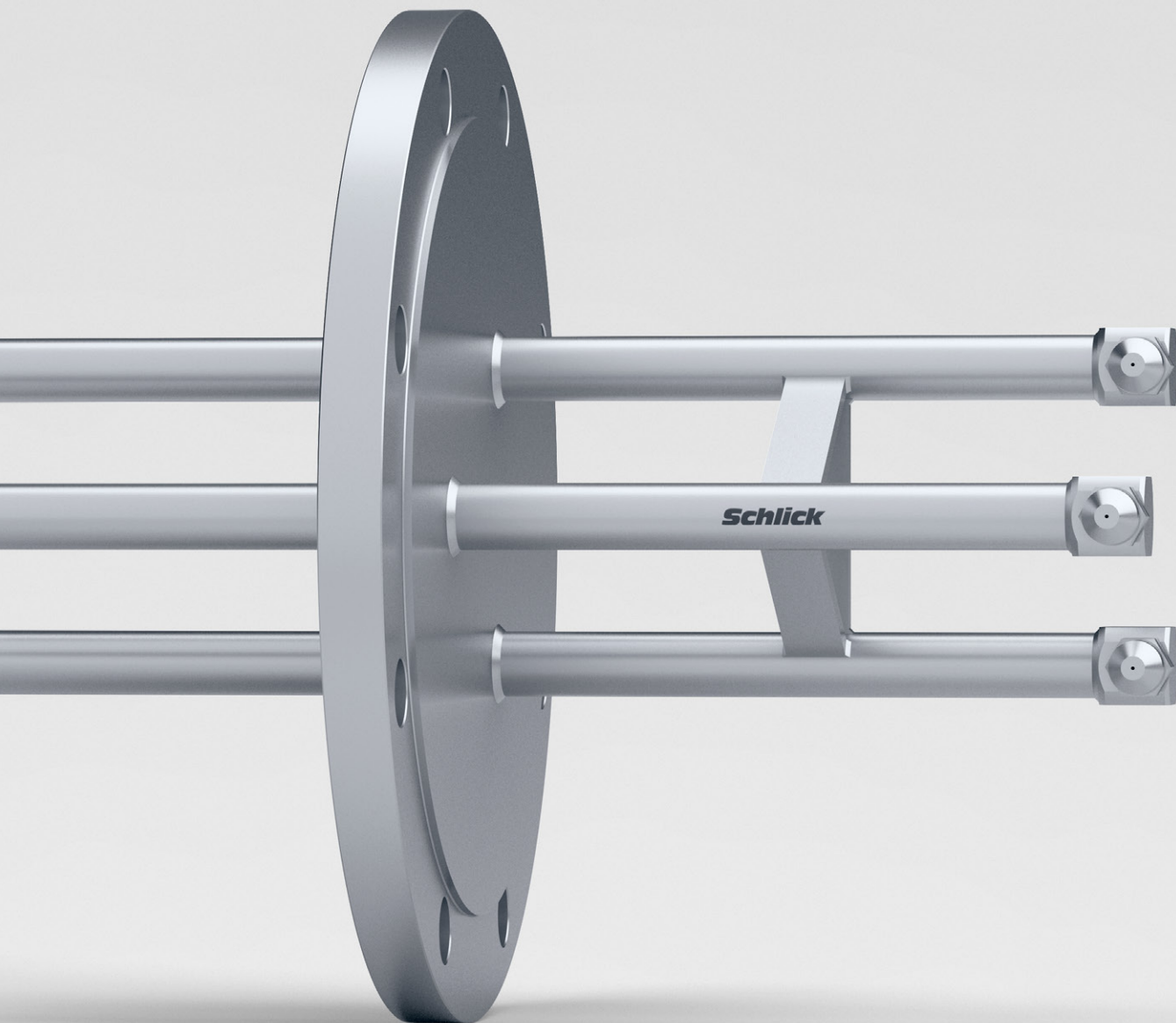


## Special and custom versions.

Many of our customers demand custom solutions and bespoke modifications, which can only be achieved through close consultation with expert advisers and engineers. Whatever the requirements, be it an individual system attachment, a specific large-scale spray coverage, or a process-specific design, SCHLICK can help. Our customers rightly trust in our expertise. With our fast and flexible approach, we will work to find a solution that meets your precise requirements and develop innovative technologies to realise your goals. All in line with our motto: Your application – our solution.

# Customised.

'Living for Solutions' is our motivation. Our solution-oriented approach is based on continuous research and product optimisation, as well as the constant development of new techniques and procedures. This is the only sustainable way to meet individual customer requirements to a high standard. Constant and close contact with the customer, from their initial enquiry right through to product renewal, is fundamental to our business model. It ensures we can supply our customers with the very best solutions exactly when they need them. This applies for both standard and custom solutions.

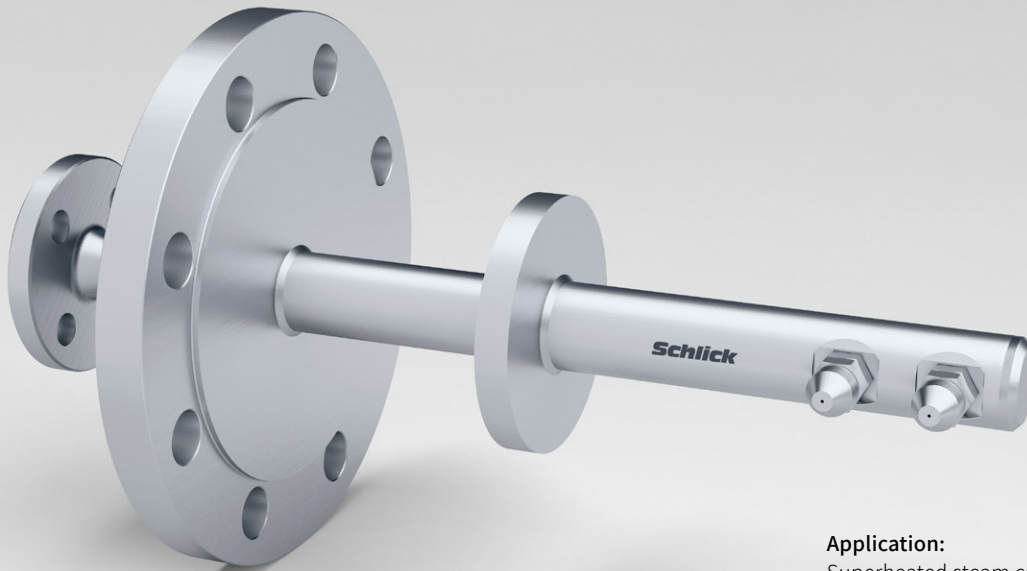


# Optimum.

We are one of the world's leading experts in atomisation technology, with a vast wealth of experience, impressive problem-solving abilities, and a high level of manufacturing expertise. SCHLICK always tries to find the best solution for the customer. Alongside our experienced employees, the unique SCHLICK Test & Research Center forms an essential building block in this process. Here, recognised experts use their knowledge to perfect the very latest in measurement technology.

**Application:**  
Air, gas or superheated  
steam cooling

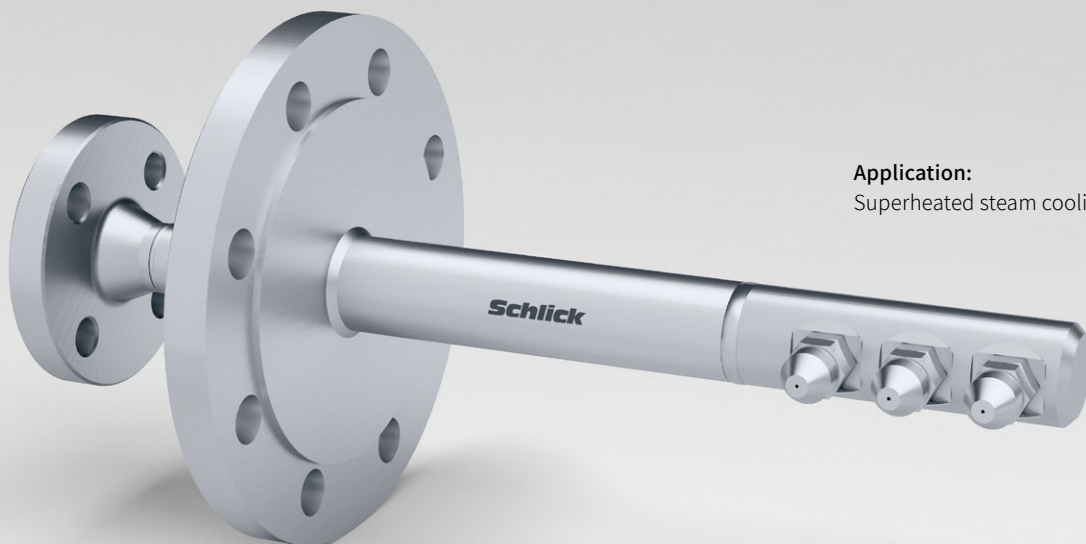




**Application:**  
Superheated steam cooling

## Transforming ideas into reality.

Our approach is based on two key pillars: a high level of vertical integration and extensive experience in the development and optimisation of spray technology systems. More than 90,000 designs and solutions are testament to our success. In fact, examples of our solutions can be found in almost every industry. All have been subject to rigorous functional and reliability testing at the SCHLICK Test & Research Center prior to commissioning, as reliability is key if you want to keep modern manufacturing processes running smoothly.



**Application:**  
Superheated steam cooling



**Application:**  
Air, gas or superheated  
steam cooling

Spraying at its best.

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

**Consultation, engineering, production and testing.**

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Subject to technical alterations . 09.2022



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