

930系列模块化喷嘴 Module System Range 930

930系列喷嘴可用于各种雾化场合，
雾化均匀，一致性好

*The SCHLICK module system range 930 allows
the most diverse applications and ensures
reproducible results*

关键部件的表面粗糙度小于0.8
(且设计符合FDA认证)

*Functional components with a surface
quality of Ra < 0.8 (also available as designs
conforming to FDA)*

极为均匀的雾化分布

*Outstanding homogenous
spray pattern*

雾化成形气压可调，
最大程度地减少了能源消耗

*Maximum energy saving through
adjustable pattern air*

SCHLICK经典喷嘴系列

百分百德国制造

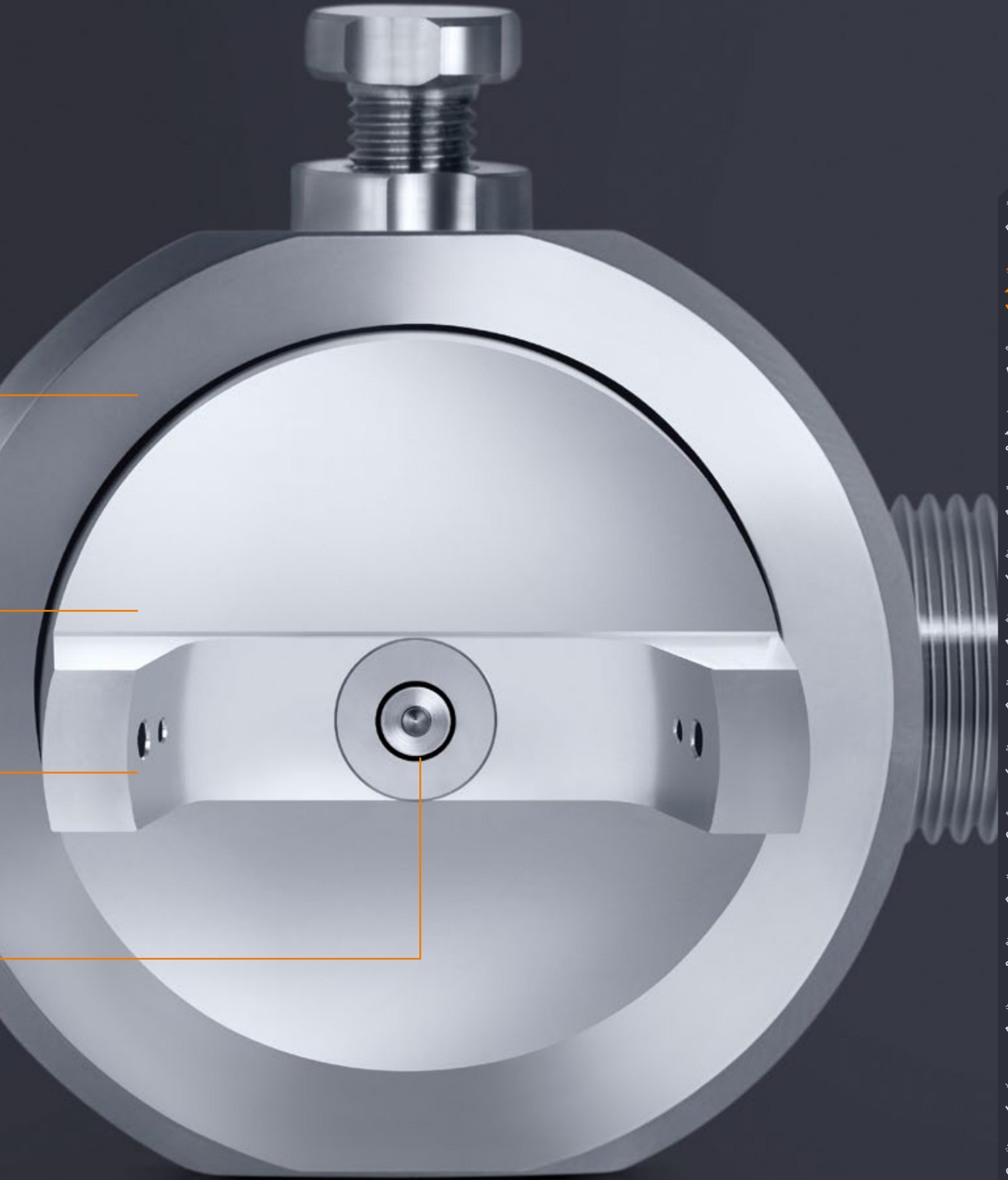
可选材料

- 耐酸不锈钢
- 黄铜
- 钛合金
- 镍基合金
- 客户指定材质

Materials

- Acid resistant stainless steel
- Brass
- Titanium
- Hastelloy
- Custom materials available on request

如有技术变更，恕不另行通知。



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Product Overview

两液体喷嘴
Two-Substance
Nozzles

防滴漏/专业包衣技术
ABC/PCA Technique

三/四液体喷嘴
Three-/Four-
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多喷头技术
Multispray

喷射杆
Insertion Pipes

喷嘴头
Nozzle Heads

实心锥喷嘴
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硬质合金喷嘴
Carbide Nozzles

扁平喷嘴
Flat-Spray Nozzles

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混合喷嘴
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清洗喷嘴
Cleaning Nozzles

喷嘴附件
Accessories

测试中心
Test Center

930系列模块化喷嘴

Module System Range 930

Mod.930

双流体喷嘴/可调式扁平喷嘴/外混型喷嘴
Two-Substance Nozzles / Flat Spray Adjustable / External Mixing



雾化面积大、应用范围广

930系列喷嘴，可采用压缩空气、煤气、蒸汽进行雾化(0.5bar以上)，雾化面积大

基于液体的粘度、密度和表面张力，液体可采用真空吸入也可通过压力泵入，某些情况下，此系列喷嘴也可用作喷射喷嘴

外混型两流体喷嘴可以单独控制液体流量和雾化液滴的大小。

此系列喷嘴，流量大小基本都是通过压力差控制的。在带有针阀的喷嘴型号，流量也可通过针阀的调节来调节

此系列喷嘴全部采用模块化结构。这意味着它可以很容易地改造成其他型号的喷嘴。而且每个零件都可单独更换，不影响雾化效果。

Humidifying and light wetting: Broad-spectrum for large areas

With the SCHLICK model range 930, the liquid is applied to a specific large surface using compressed air, gas or steam – from 0.5 bar (g).






Depending on the viscosity, density and surface tension, the liquid can be aspirated over a gradient or fed under pressure. Within certain limits, the nozzles can also act as injectors.

External-mix two-substance nozzles allow independent control of the flow rate and fineness of the atomization.

The flow rate for all models is controlled through the liquid pressure difference. In the model with a regulating pin, the flow rate can also be regulated by the pin setting.

The SCHLICK model 930 is manufactured as a modular construction. This means that it can easily be rebuilt into other designs. Replacement parts are available for all individual parts, with reproducible results ensured.

	雾化形状	扁平椭圆形
	雾化角度	10° - 90°
	液滴大小	10 - 150 μm
	处理量	0,016 - 1,5 l/min
	常规喷嘴孔径	0,5 / 0,8 / 1,0 / 1,2 / 1,5 / 1,8 / 2,0 / 2,2 mm 最小孔径0.3mm, 后面按0.1mm 或者其整数倍增加均可

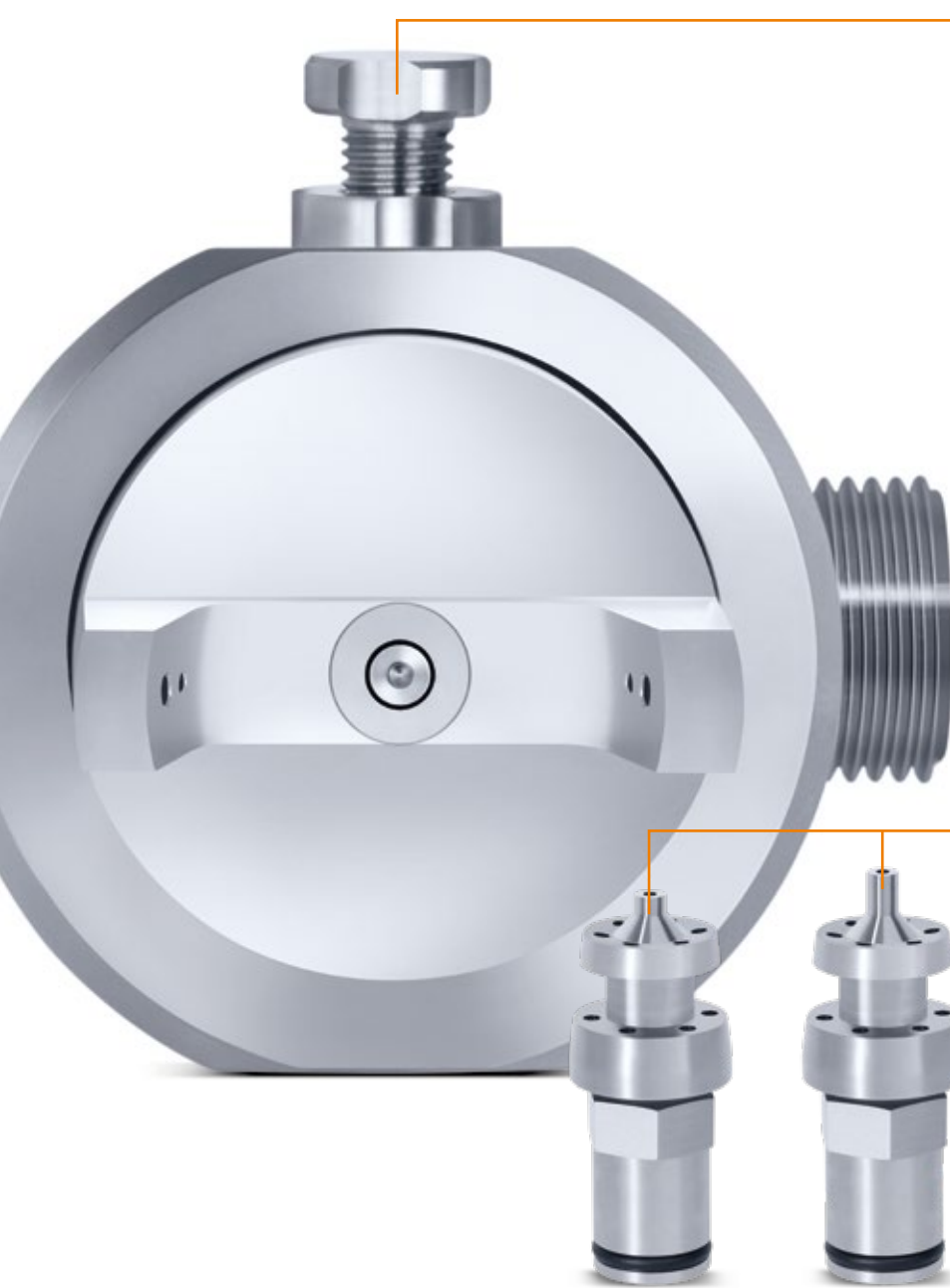
	Spray pattern:	oval flat spray
	Spray angle:	10° - 90°
	Droplet size:	10 - 150 μm
	Capacity:	0.016 - 1.5 l/min
	Standard orifices:	0.5 / 0.8 / 1.0 / 1.2 / 1.5 / 1.8 / 2.0 / 2.2 mm Customized bore sizes are possible starting from 0.3 mm upwards in 0.1 mm steps

创新性产品设计

- 拆装非常简单
- 显著减少维修时间
- 多种安装方式可选
- 终身售后服务保障
- 免费产品设计和技术支持

Innovative product design

- Extremely easy to adapt for maximum flexibility
- Significant reduction in maintenance downtimes thanks to easy access to all components
- Wide range of installation options thanks to modular construction
- Long-term after-sales warranty
- Engineering free of charge



调整喷嘴上的螺栓，雾化成形可以在10°~90°之间调整。

将螺栓拧到底时，雾化形状为10°左右的圆形；当慢慢松开螺栓时，圆形将慢慢变为扁平雾化。

最大扁平角度可以达到90°

The angle of aperture of the flat spray is continuously adjustable between 10° and 90° using the adjusting screw on the nozzle unit.

Turning the adjusting screw down to its limit stop produces a circular jet of approx. 10°; as the screw is slowly opened, this 10° circular spray becomes a flat spray.

This allows the user to set any flat spray angle required up to a maximum of 90°.

所有喷嘴均可选用加长喷芯，有利于粘性液体的雾化以及最大程度减少喷嘴处的结须。

All nozzle forms can also be delivered with extended liquid inserts. These optimise the atomization of tacky liquids and minimise build-up at the air expulsion hole.

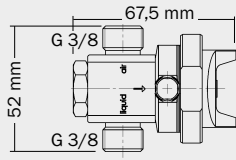
930系列模块化喷嘴

Module System Range 930

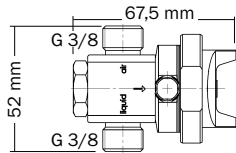
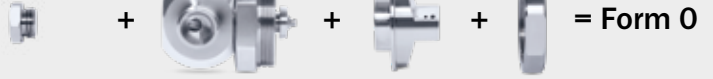
Mod.930

双流体喷嘴/可调式扁平喷嘴/外混型喷嘴

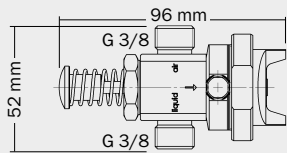
Two-Substance Nozzles / Flat Spray Adjustable / External Mixing



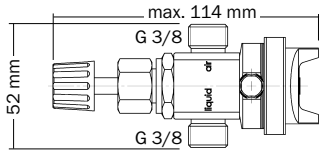
盲堵头
Dummy plug



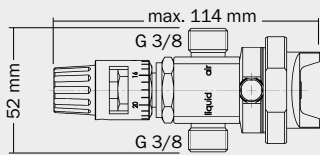
带涡流杆盲堵头
Dummy plug and swirl chamber



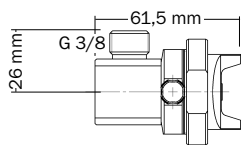
防堵通针
Cleaning needle



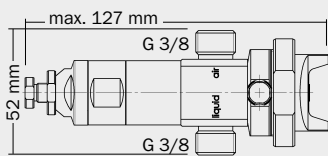
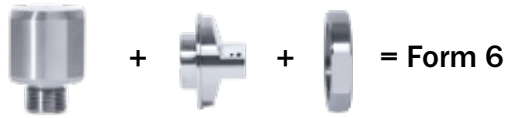
流量调节针阀
Liquid flow control needle



带刻度流量调节针阀
Scale

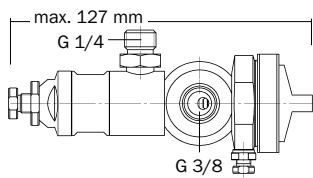


液体从中心进料
Central liquid feed



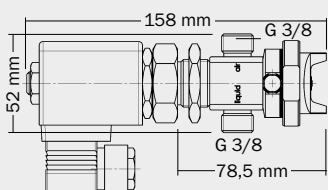
100% 无滴漏
drip-free

气动控制
Pneumatically controlled



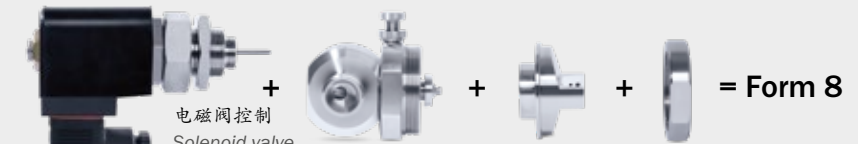
单独控制气控制
Pneumatically controlled by control air

100% 无滴漏
drip-free



电磁阀控制
Solenoid valve

100% 无滴漏
drip-free



采用盲堵设计的基本款，
用于吸入或者重力差供液的雾化场合

Basic model with dummy plug. Designed for the atomisation of liquids that are either siphoned or fed by gravity at a slight gradient.

采用涡流杆设计，
用于需要液滴比较小的雾化场合，
特别适用于纺织品的湿润

Dummy plug with swirl chamber. Designed for fine atomisation of liquids under pressure. Especially suitable for integration in textile web moisturising equipment.

采用防堵通针设计，
生产过程中就能实现快速疏通喷芯，
用于高粘度或者有杂质的液体雾化场合

Supplied with cleaning needle. For fast nozzle orifice cleaning during operation. Designed for the atomisation of sticky, impure, or highly viscous liquids, etc.

采用流量调节针阀，
用于流量大小需要经常调节的场合

Supplied with a liquid flow control needle for atomising tasks having highly variable flow rates.

和设计4类似，增加了刻度显示，
可精准设置流量，用于测试、
实验室等场合

As Form 4, but with a scale etched on the liquid control needle for fine setting of the flow rate, designed for experiments, laboratories, etc.

采用液体从中心供料，
用于高粘性溶液、如浆料等的雾化

With straight (central) liquid feed, for atomisation of highly viscous solutions, pastes, etc.

使用雾化气控制针阀，当雾化气关闭时，
针阀顶出(也可换成防堵通针)，
封闭喷芯，适用于避免滴液的雾化场合，
比如蚀刻、标记、连续喷涂等。

Pneumatically controlled using the atomising air. The nozzle needle (also available as cleaning needle) closes the orifice automatically and abruptly when the atomising air is shut off. Especially suitable for etching, marking, cyclic spraying and above all for liquids under pressure where drips are to be avoided.

和设计7类似，增加了单独的控制气控制针阀
(雾化气可不关闭)

As Form 7, but with control by control air, with special connector (atomising air can carry on blowing).

电磁阀控制
标准设计：230V 50Hz;
环境温度(100%使用)：最大55°C; 防水等级：IP65;
循环频率仅受转换时间的限制

*With solenoid valve
Standard design: 230 V, 50 Hz, 100 % ED
Ambient temperature: max. 55 °C, enclosure protection IP 65
Cycling frequency limited only by the changeover time*

myschlick.com

930系列模块化喷嘴 *Module System Range 930*

Mod.930

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Mittag

双流体喷嘴/可调式扁平喷嘴/外混型喷嘴
Two-Substance Nozzles / Flat Spray Adjustable / External Mixing

如有技术变更,恕不另行通知。

应用

- 包衣
- 消毒
- 精整
- 流水线定量雾化
- 定量
- 混合
- 增湿
- 工艺工程

Applications

- Coating
- Disinfection
- Finishing
- Lining
- Metering
- Mixing
- Moisturising
- Process engineering

Abends



Subject to technical alterations.

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Carbide Nozzles

扁平喷嘴
Flat Spray Nozzles

喷射喷嘴
Smooth-Jet Nozzles

混合喷嘴
Mixing Nozzles

拉瓦尔喷嘴
Laval Nozzles

清洗喷嘴
Cleaning Nozzles

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具体技术参数 Technical Details

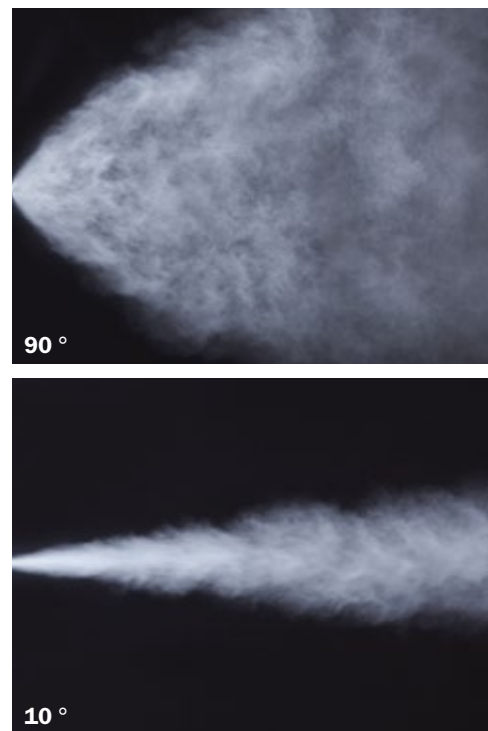


930系列喷嘴性能参数 Performance specification of model 930

型号 <i>Model</i>	喷嘴孔径 (mm) <i>Bore diameter liquid insert in mm</i>	雾化气压力 (bar) <i>Atomising air pressure in bar</i>	雾化气的消耗量 (立方/小时) <i>Atomising air consumption in Normal m³/h</i>	不同高度下的液体虹吸流量 升/分钟 (设计形式0) <i>Max. siphon volume in l/min, Form 0, siphon height in mm</i>		
				50	150	300
930	0.8	0.5	4.2	0.020	-	-
		1.0	6.5	0.040	0.038	-
		1.5	8.1	0.055	0.045	0.025
		2.0	10.6	0.075	0.060	0.045
931	1.2	0.5	4.2	0.100	0.070	-
		1.0	6.5	0.140	0.120	0.030
		1.5	8.1	0.160	0.135	0.120
		2.0	10.6	0.175	0.150	0.130
932	1.8	0.5	4.2	0.150	0.100	-
		1.0	6.5	0.190	0.150	0.060
		1.5	8.1	0.240	0.200	0.150
		2.0	10.6	0.270	0.230	0.175
933	2.3	0.5	4.2	0.170	0.120	-
		1.0	6.5	0.215	0.270	0.100
		1.5	8.1	0.260	0.400	0.175
		2.0	10.6	0.300	0.450	0.190

90°扁平雾化
Flat spray 90°

930 嘴雾化 Spray model 930



雾化气压力 (bar) <i>Atomising air pressure in bar</i>	雾化气的消耗量 (立方/小时) <i>Atomising air consumption in Normal m³/h</i>	最大处理量 (以水为例,升/时) <i>Max. water flow rate l/h</i>	空气和水的重量比 <i>kg air/kg water</i>
0.5	4.6	5.0	1.10
1.0	6.6	8.0	0.95
1.5	8.0	12.0	0.79
2.0	9.5	18.0	0.63
2.5	11.0	25.0	0.53

这里的最大流量，是指液滴平均大小在50微米以下的情况下的最大流量。

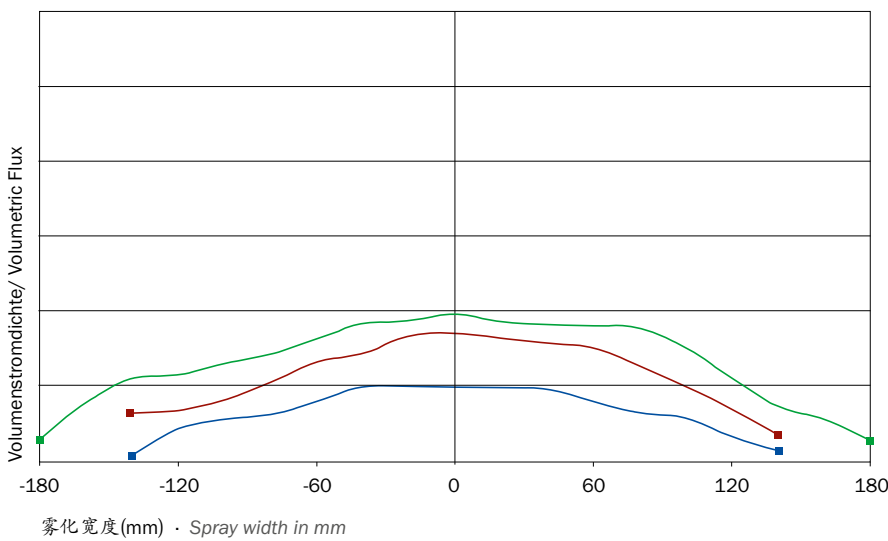
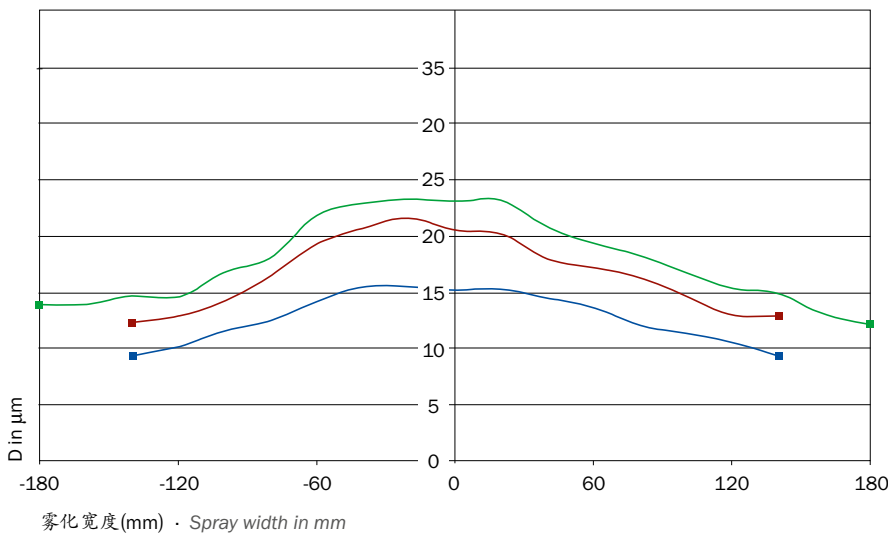
The values quoted in the table above are the maximum flow rates at which a fine atomisation with a mean volume droplet size of 50 microns is ensured.

相位多普勒测量技术
- 雾化效果可测量

SCHLICK测量系统采用双相位激光多普勒测试原理(5瓦氩离子激光器), 能精准测量雾化液滴参数和其流体特性

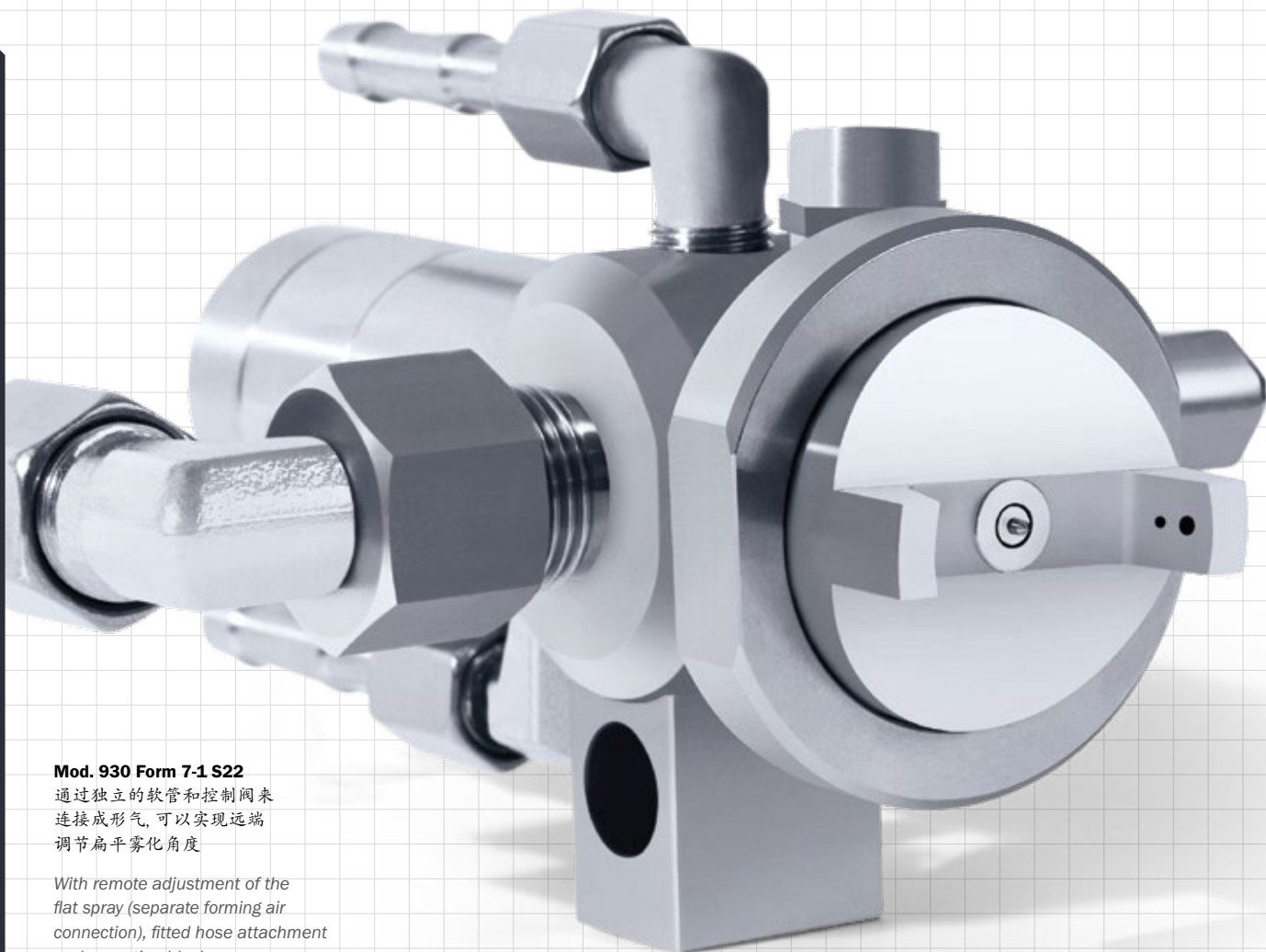
PDA measurement technology – measurable success

SCHLICK uses a drop measurement device designed according to the dual PDA principle (Phase-Doppler Anemometry), with a 5-watt (argon-ionic) continuous wave laser.



客户定制设计 Customized Designs

Mod.930



Mod. 930 Form 7-1 S22

通过独立的软管和控制阀来
连接成形气, 可以实现远端
调节扁平雾化角度

*With remote adjustment of the
flat spray (separate forming air
connection), fitted hose attachment
and mounting block.*

单件或者小批客户定制

作为一家全球领先的喷嘴制造商,
SCHLICK一直为客户提供高质量的标准解决方案

当然, 凭借高精度的制造能力以及丰富的研发经验,
SCHLICK也可根据客户特殊要求进行
设计开发

即使客户的需求量少, 交期紧

Custom and individual designs, small series

*As a leading nozzle manufacturer, high quality standardised
solutions are business-as-usual for SCHLICK.*

*However, thanks to the breadth of its manufacturing capacities
and comprehensive expertise, SCHLICK can also produce
custom and individual designs for specific applications.*

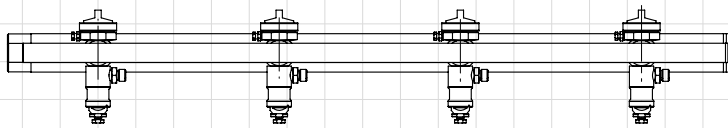
No matter how small the series or short the timeframe.



Mod. 930 Form 7-1 S35

此喷嘴结构简单, 部件少, 因此拆装更简单, 也容易清洁。
另外, 还可以增加液体回收功能以及独立的控制阀。
(详情请参考“SCHLICK防结须”小册子)。

*Fewer individual parts; therefore it is easier to assemble/disassemble and clean.
Function and spraying pattern as with standard models. Optionally available with
a liquid return system and – for easy assembly – a separate mounting block
(see also “SCHLICK ABC-Technology”).*



配备930 7-1喷嘴的喷杆
大面积雾化时, 客户可以根据实际应用, 独立地调整各个喷嘴位置

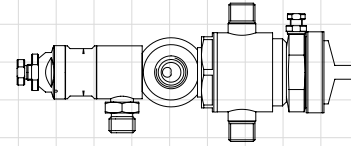
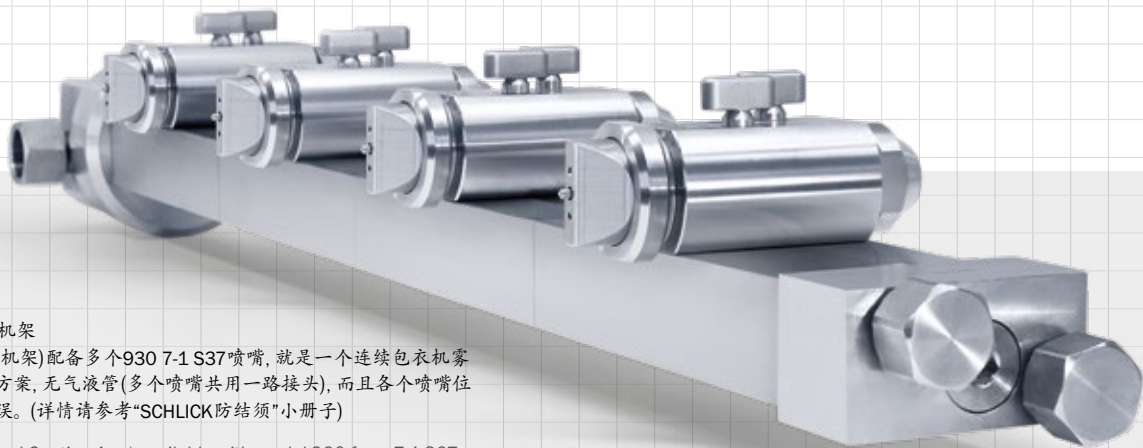
Header spray pipe with model 930 form 7-1

*For spraying material webs or large areas; distances can be individually set
according to client needs.*

连续包衣机架

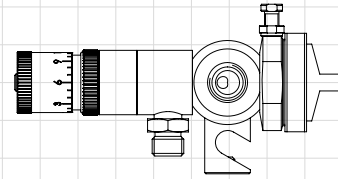
(连续包衣机架) 配备多个930 7-1 S37喷嘴, 就是一个连续包衣机雾化的解决方案, 无气液管(多个喷嘴共用一路接头), 而且各个喷嘴位置精准无误。(详情请参考“SCHLICK防结须”小册子)

*(Professional Coating Arm) available with model 930 form 7-1 S37.
A complete solution for a hose-free and precisely positioned nozzle
arrangement in tablet coaters (see also “SCHLICK ABC-Technology”).*



Mod. 930 Form 7-1
配备加热/冷却护套。

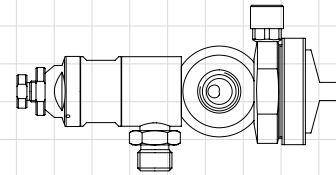
With heating/cooling jacket.



Mod. 930 Form 7-1 S38

流体流量设定有刻度显示,
可实现精准设定。

*With scale for fine setting of liquid flow rate
and fixing block.*



Mod. 930 Form 7-1 S22

成形气配备独立连接口,
能现实雾化角度的准确调节。

*With separate flat spray air connection
for exact setting of the spray angle.*