## 0/2-0/9 系列模块化喷嘴 Module System Range 0/2-0/9



# SCHLICK 雾化解决方100%德国本土制造

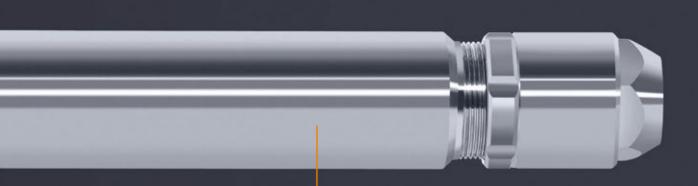
喷杆长度可依据客户要求调整

Available with individually adjusted shaft length as standard for diverse application options

核心组件的表面粗糙度小于0.8,确保了雾化 效果的一致性

Functional components with a surface quality of Ra < 0.8 – reproducible results guaranteed







#### 可选材质

- 耐酸不锈钢
- 耐热不锈钢
- 钛合金
- 钽金属
- 碳化物
- 哈氏合金
- 铬镍铁合金
- 客户指定材质

#### Materials

- Acid resistant stainless steel
- Heat resistant stainless steel
- Titanium
- Tantalum
- Carbonide
- Hastelloy
- Inconel
- Custom materials available on request

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Flat 5th

Mixing Nottles

Laval Modules

Cleaning Motel

Accessor

## 0/2-0/9 系列模块化喷 Module System Range 0/2-0/9



#### 稳定-无论液体处理量大小

作为枪身加长(喷杆)的二流体喷嘴,0/2-0/9系列喷嘴也可用来进行大流量雾化,雾化颗粒也比较小。

0/2-0/9系列喷嘴,可采用压缩空气、煤气、蒸汽进行雾化,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。

# Resistant – no matter what the liquid quantity

Two-substance nozzles as lance models also allow very fine atomisation of large liquid quantities.

With the SCHLICK model range 0/2-0/9, 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.

SCHLICK Mod. 0/4

外混型二流体喷嘴,可以单独控制流量大小和雾化液滴大小。

此系列喷嘴,流量大小基本都是通过压力差控制的。在带有 针阀的喷嘴型号中,流量也可以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。 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 series 0/2-0/9 is manufactured using modular construction. This means that it can easily be rebuilt into other designs. Replacement parts are available for all individual parts and reproducible results are ensured.



创新的产品设计

- 安装拆卸非常简单
- 适用于大流量雾化气场合
- 雾化角度可在10°~40°之间任意调节
- 应用场合极为广泛
- 终身售后服务保障
- 免费产品设计和技术支持

#### Innovative product design

- Extremely easy installation/de-installation
- Designed for high air flow rate performance
- Continuous adjustment of the scatter cone from 10-40°
- Very wide range of applications
- Long-term after-sales warranty
- Engineering free of charge

0/2-0/9系列喷嘴,喷杆的长度可依据客户不同应用调整。

SCHLICK models 0/2-0/9 are available with individually adjusted shaft length as standard for very varied applications.

通过调整风帽位置,雾化角度可在 10°~40°之间任意调节。

The scatter cone can be continuously set between 10° and 40° through simple regulation of the air cap position.

只需要更换风帽,就能改造成内混型喷嘴(SCHLICK专利技术)。

**Plug & Spray:** The SCHLICK patented internal-mixing model can be updated by simply changing the air cap.

所有喷嘴均可提供加装加热套环或 冷却套设计。

All designs can be delivered with heating and cooling jackets.





雾化形状: 实心锥形



雾化角度: 10°-40°



液滴大小: 10 - 150 微米



处理量: 0,1-100,0 升/分钟



标准喷嘴孔径: 0,5 mm - 13,5 mm 最小孔径0.3mm,

后面按0.1mm或者其整数倍增加均可



**Spray pattern:** circular full-cone



Spray angle: 10° – 40°



Droplet size:  $10 - 150 \mu m$ 



**Capacity:** 0.1 – 100.0 l/min



Standard orifices:

0.5 mm - 13.5 mm

Customized bore sizes are possible starting from 0.3 mm upwards in 0.1 mm steps

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Mixing Mozzle

Laval North

Cleaning Mozzle

· Market Accessories

Military Center

## 0/2-0/9 系列模块化喷嘴 Module System Range 0/2-0/9



#### Form 0

此系列是基本型喷嘴, 没有流量控 制针阀也没有防堵通针,用于雾化 压力较小的场合。

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





#### Form 3

此系列喷嘴, 配有防堵通针,可在 生产过程中实现清洁喷芯(防堵),此 类喷嘴用于高粘度或者不洁净液 体的雾化。

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





#### Form 4

此系列喷嘴, 配有液体 流量控制针阀,用于流 量经常变化的雾化场

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

> 流量控制针 Liquid flow control needle



#### Form 6

此系列喷嘴,从喷杆中心直接进 料, 用于高粘性溶液、糊料等的雾 化。

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





神奇的SCHLICK雾化技术 -专为雾化解决方案而存在

从设备设计规划到实际批量生产, SCHLICK都能提供完美解决方案。

#### Clever SCHLICK technology – Living for Solutions

SCHLICK know-how: from planning to installation. We would be delighted to assist in the optimisation of your technical and operational results.

#### Form 7-1

此系列喷嘴,通过单独的控制阀,可以在雾化气体突然关闭的情况下,驱动通针关闭喷芯 (停止喷液),尤其适用于蚀刻、标记、循环喷涂等需要避免滴落的应用场合。

With pneumatic control through a separate attachment for control air (atomisation air does not need to be shut off). 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.



#### 具体技术参数/尺寸 Technical details/dimensions

型号 Model	0/2	0/4	0/5	0/5 \$14	0/9
流量 (以水为例, 升/小时) Water flow rate in I/h	100	300	800	2400	3600
喷芯孔径(mm) Bore diameter liquid insert in mm	max. 2.5	max. 4.0	max. 8.0	max. 13.5	max. 13.5
风帽孔径(mm) Bore diameter air cap in mm	5.0	9.0	15.0	20.0	40.0
液体连接口尺寸 Liquid inlet port	$\mathrm{G}^{1\!/}_{2}$	$\left. \mathrm{G}^{1}\right/ _{2}$	$G^3/_4$	G 1	法兰 Flange
雾化气连接口尺寸 Air inlet port	$\mathrm{G}^{1\!/}_{2}$	$\mathrm{G}^{1\!/}_{2}$	$G^3/_4$	G 1 <sup>1</sup> / <sub>2</sub>	法兰 Flange
针阀控制气连接口尺寸 (7-1系列) Control air inlet port (Form 7-1)	$\mathrm{G}^{1}\!/_{4}$	$G^{1}/_{4}$	$G^{1}/_{4}$	-	-
喷杆长度 Shaft length	依客户要求 Individual	依客户要求 Individual	依客户要求 Individual	依客户要求 Individual	依客户要求 Individual

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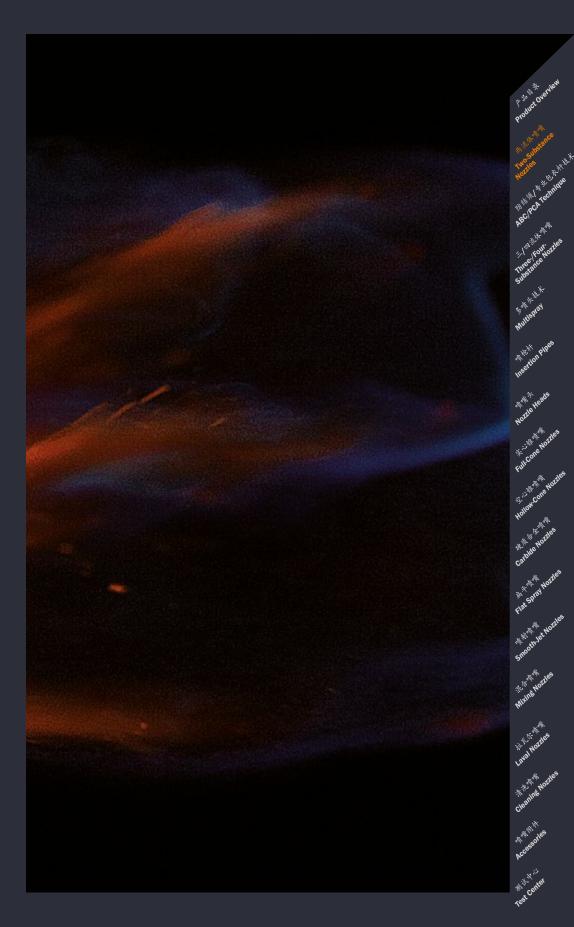


#### 应用

- 吸附
- 包衣
- 燃烧
- 整精
- 流化床技术
- 造粒
- 混合
- 脱硫脱硝
- 石油、酒精回收
- 工艺工程
- 污水焚烧
- 喷雾干燥
- 增稠
- 烟草工业

#### **Applications**

- Adsorption
- Coating
- Combustion
- Finishing
- Fluid bed technology
- Granulating
- Mixing
- No<sub>x</sub>-Reduction (SCR-/SNCR-technologies)
- Oil, alcohol recovery
- Process engineering
- Sewage incineration
- Spray drying
- Thickening
- Tobacco industry (casing, flavouring)



## 具体技术参数 Technical Details



自带喷杆型二流体喷嘴: 0/2-0/5 S24系列

Two-substance nozzles als lance models series 0/2-0/5 S24

型号 Model	6bar时, 雾化气消耗量 (立方/小时) Atomising medium at 6 bar (g) in Normal m³/h air	最大处理量 (以水为例, 升/小时) Maximum water flow rate in I/h	液滴大小 (微米) Volumetric middle droplet size in μ	雾化介质/ 液体处理量之比 (公斤) kg drive medium/ kg water
0/2	40	100	50	0.4
0/4	98	300	50	0.33
0/5	270	600	50	0.35
0/5 S14	590	2300	70 - 80	0.26
0/5 S24	920	3600	70 - 80	0.26

雾滴的大小可以通过雾化介质与液体的重量比来调节。

The droplet size can be set individually via the ratio in kilograms of atomisation medium to liquid.

外混型喷嘴0/4雾化情况 Spray of external mixing model 0/4



通过调整风帽的位置,雾化角度可以10°到40°之间调整。 此种雾化的特点是液滴的速度快、压力大,尤其在中心 位置。

The scatter cone can also be continuously set between 10° and 40° through the air cap position. The spray is characterised by a high speed impulse of the droplets and a high local liquid pressure, especially at the centre of the spray.



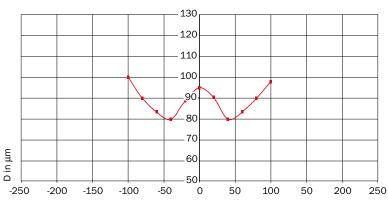
相位多普勒测量技术

- 雾化效果可测量

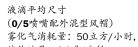
SCHLICK 测量系统采用双相位激光多普勒测试原理 (5瓦氫离子激光器),精准测量雾化液滴颗粒和其流动特性

## 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.



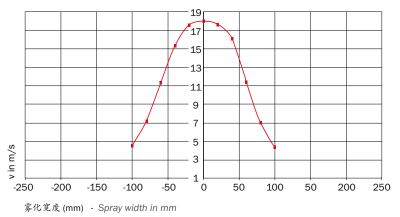
雾化宽度 (mm) · Spray width in mm



液体流量: 6.0升/分钟, 距离: 300 mm

## Mean droplet size of Model 0/5 with external mix air cap

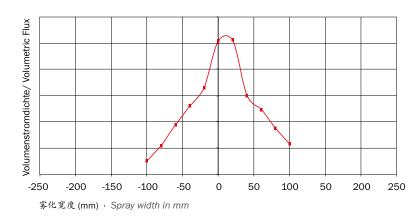
Atomising air consumption: 50 m³/h, liquid flow rate: 6.0 l/min, distance: 300 mm



水平方向雾化速度 (**0/5**喷嘴配外混型风帽) 雾化气消耗量:50立方/小时, 液体流量:6.0升/分钟, 距离:300 mm

## Horizontal velocities of Model 0/5 with external mix air cap

Atomising air consumption: 50 m³/h, liquid flow rate: 6.0 l/min, distance: 300 mm



体积密度 (**0**/**5**喷嘴配外混型风帽) 雾化气消耗量:50立方/小时, 液体流量:6.0升/分钟,

液体流量: 6.0升/分 距离: 300 mm

## Volume density of Model 0/5 with external mix air cap

Atomising air consumption: 50 m³/h, liquid flow rate: 6.0 l/min, distance: 300 mm

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## 客户定制设计 Customized Designs



#### 可客户要求定制, 小批量生产

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化解决方案。

当然,凭借高精度的制造能力以及丰富的研发经验, SCHLICK也可根据客户要求进行设计开发、 定制喷嘴。

即使客户需求数量的很少、交期又很急。

## 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 breath 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.



