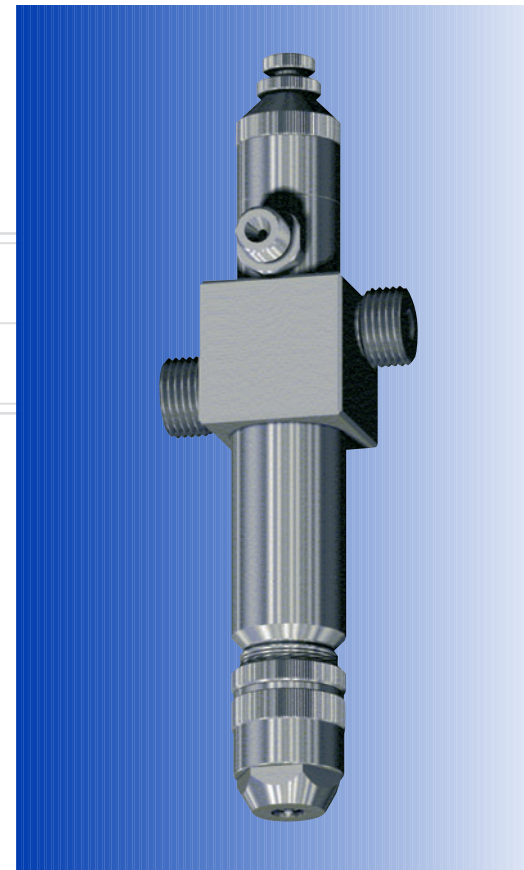


Schlick Series 0/2-0/60 Two-Substance Lance Nozzles

Applications:

- Adsorption
- Coating
- Combustion
- Finishing
- Fluid bed technology
- Granulating
- Mixing
- NO_x removal
- Oil, alcohol recovery
- Process engineering
- Sewage incineration
- Spray drying
- Thickening
- Tobacco industry



Schlick two-substance lance nozzles

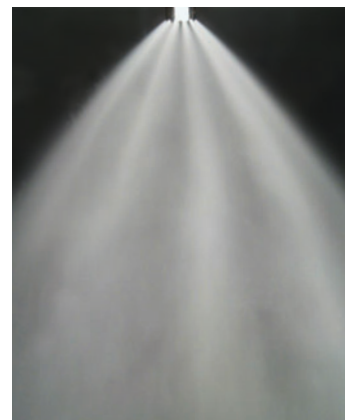
- Two-substance lance nozzles can fully atomise liquids in large volumes into finest droplets.
- The 0/2-0/5 Series work on the principle of **external mix** whereby the two components do not mix until they leave the nozzle's orifice. The principle of external mix two-substance nozzles makes independent control of atomisation fineness and flow rate possible.
- On external mix models, the spray angle can be set between 10° and 40° with the air cap setting.
- The spray pattern is characterised by a high velocity droplet impulse and a high local liquid density especially in the centre of the spray.
- Within certain limits this series of nozzles can also be employed as injectors.
- The 0/60-0/63 Series work on the principle of **internal mix** whereby the liquid and atomising medium are intensively mixed inside a patented internal mix air cap. The bimodal mix leaves the air cap through several orifices.
- The internal mix cap allows a spray angle of approximately 70° and a lower velocity with uniform volume flow density over the whole spray pattern to be achieved simultaneously.
- By changing the air cap, an external mix two-substance nozzle is easily modified to an internal mix version and vice versa.
- Depending on liquid viscosity, flow rate, density, and surface tension this series of nozzles is available:
 - with control needle
 - with cleaning needle
 - with atomising screw
 - with X twist body
 - with three slot spinner
 - without initial atomisation
- Nozzles without initial atomisation are particularly suited to atomising viscous media and suspensions.
- The liquid pressure differential is used to control the flow rate on all models. On the version with control needle the flow rate can be additionally controlled by the position of the needle.
- A liquid control range of 1:10 is achievable (under certain circumstances 1:30 is possible).
- Compressed air, gas, or steam at a pressure of 0.5 bar or more can be used as atomising media.
- The droplet size is dependent on the mass ratio of atomising medium per kg to water per kg.



Model 0/5 – Two-substance nozzle

With external mix

Fig. 19001



Model 0/61 – Two-substance nozzle

With internal mix

Fig. 19002

Nozzle designs

The basic design of Model 0/4 is shown here. This design has been applied to all models in the 0/2-0/5 S24 Series. All models are available with the internal mix air cap (Series 0/60-0/62).

Form 0

With blind plug

Fig. 19003



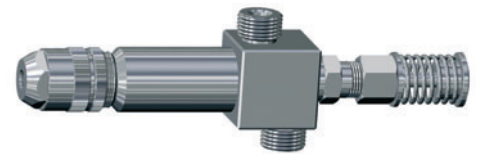
Form 3

With needle.

For fast nozzle orifice cleaning during operation.

Designed for atomisation of sticky, impure, or highly viscous liquids, etc.

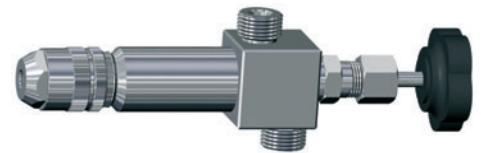
Fig. 19004



Form 4

With liquid flow control needle for atomising tasks having highly variable flow rates.

Fig. 19005



Form 6

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

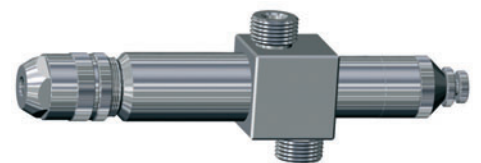
Fig. 19006



Form 7

With pneumatic control using the atomising air. The nozzle 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.

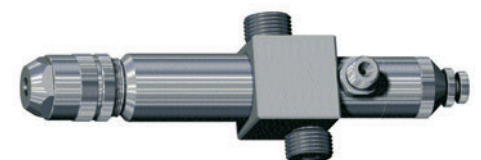
Fig. 19007



Form 7-1

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

Fig. 19008



All designs are available with heating/cooling systems.

Materials

- Acid resistant stainless steel
- Heat resistant stainless steel

- Titanium
- Tantalum

- HASTELLOY
- INCONEL

Custom products from other materials available on request

Performance specification

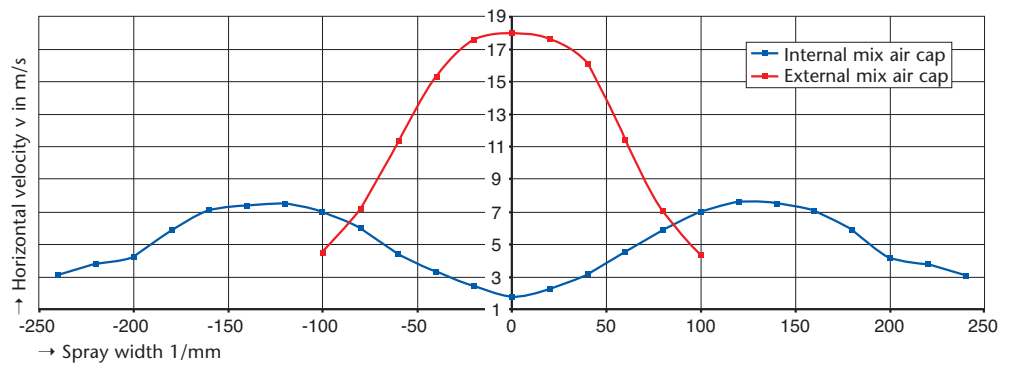
Series 0/2-0/5 S24 – Two-substance lance nozzles

Model description	Atomising medium at 6 bar in Normal m ³ /h air	Maximum water flow in l/h	Mean volume droplet size in microns	Kg drive medium to kg water
Model 0/2	40	100	50	0.47
Model 0/4	98	300	50	0.39
Model 0/5	220	650	50	0.40
Model 0/5 S14	590	2300	70 – 80	0.30
Model 0/5 S24	920	3600	70 – 80	0.30

Droplet size – Velocity – Flow density

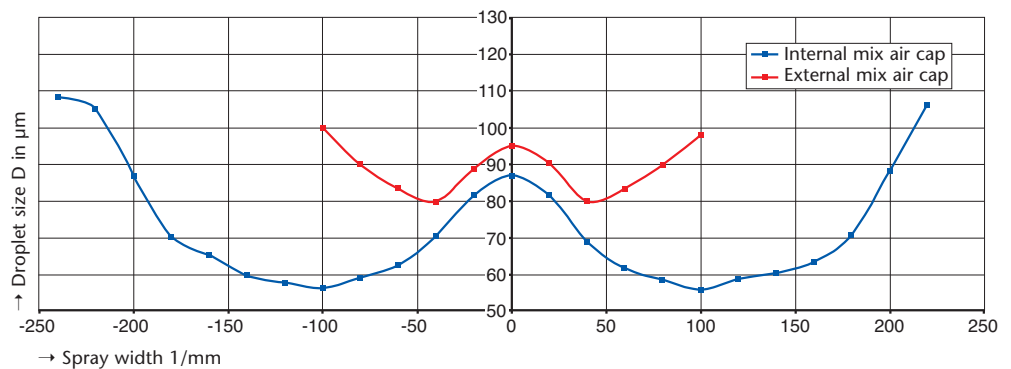
Comparison of horizontal velocities of Model 0/5 with internal mix air cap and external mix air cap

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



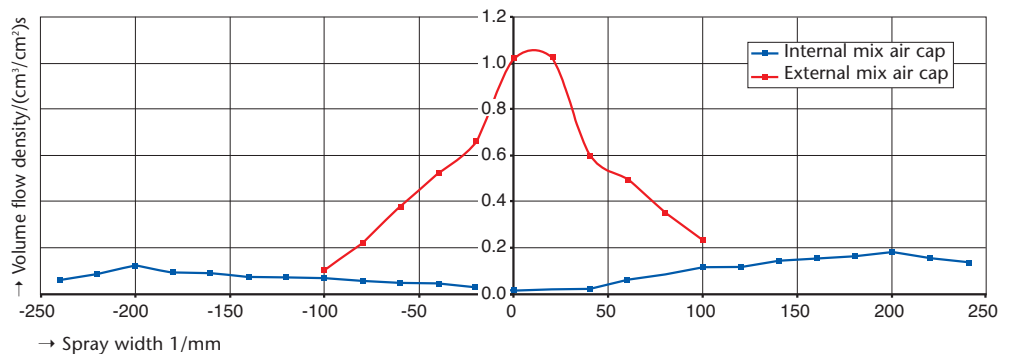
Comparison of mean droplet size of Model 0/5 with internal mix air cap and external mix air cap

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



Comparison of volume flow densities of Model 0/5 with internal mix air cap and external mix air cap

Liquid flow rate 6.0 l/min, distance 300 mm



Custom versions

Model 0/2 Form 0 – Two-substance nozzle

Angled at 90°, with fixing flange

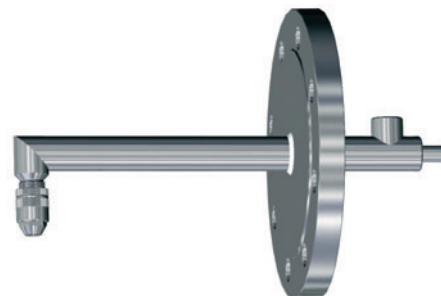


Fig. 19009

Model 0/63 Form 6 – Two-substance nozzle

With blind plug to DIN 11887

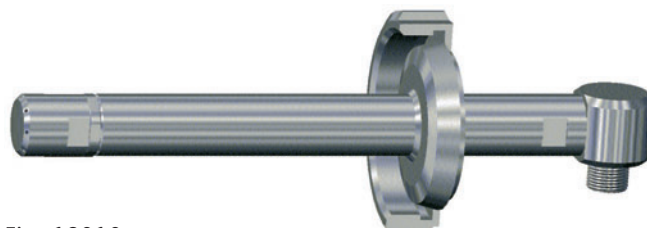


Fig. 19010

Model 0/5 Form 6 – Two-substance nozzle

With clamping sleeve



Fig. 19011

Custom designs/specialities

Insertion pipe

With seven Model 0/5 two-substance nozzles

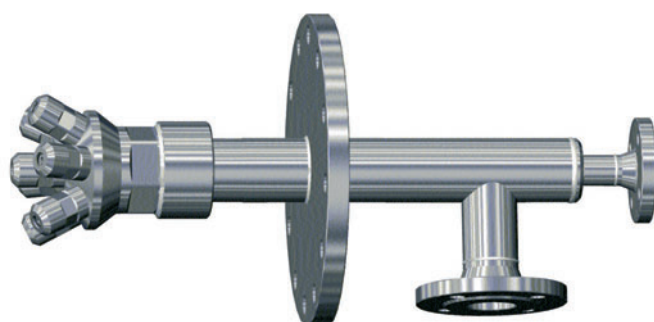


Fig. 19012

Model 0/5 – Two-substance nozzle

With gland and ball valve

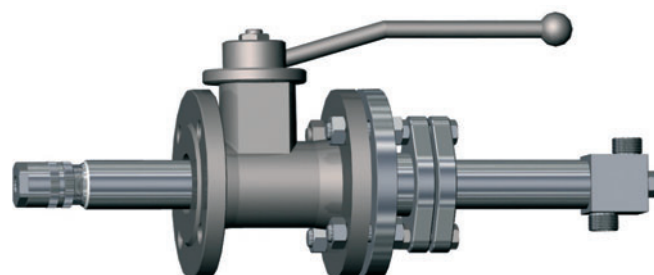


Fig. 19013

Service spectrum

Pilot test laboratory

Before any new spray nozzles are used we subject them to comprehensive trials in our own test laboratory – if need be to your operational parameters. During these tests, we precisely determine droplet size, velocities and flow densities with our modern DUAL PDA laser-measuring equipment.



Test nozzles

Schlick spray nozzles are world renowned for highest precision. We can offer you the best and most lasting solution to your requirements. And, if you want, we can supply you with test nozzles in advance – just contact us.

Engineering

Take advantage of our comprehensive expertise – from design to installation – the conception of new products or

the optimisation of existing plant. We would be glad to help you improve the success of your operation.

Repair service

As well as competent advice and its inception, you can profit from an efficient after-sales service that guarantees long-term supply of all products. We carry out both repair and conversion of Schlick spray nozzles, and in emergency, we can supply spare parts quickly and reliably.

Onsite service

If required we will investigate and develop an optimal solution to suit individual requirements onsite. We will advise you and give you support during installation and initial start-up of the plant. A further plus is the help available from our worldwide technical field service network.

Custom products

As one of the leading spray nozzle manufacturers in Europe, we can offer both high quality standard solutions and are in the position of developing customised products for individual tasks as fast as possible, even for small production runs.



Documentation to the customer's requirements

Reliability and quality are the basis for successful cooperation with our international customers. This applies both to our products and to our service. If you wish, we will supply you with all necessary documentation such as technical handbooks for the nozzles (drawings, flow diagrams, installation and operating instructions) together with factory and material specifications.



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All specifications are subject to change (flow rates/dimensions).

The performance/flow rate specifications quoted are descriptive or product identities and can vary by up to ± 5 percent on delivery.

