



**SCHLICK Two-Substance Nozzle Model 940 Form 0 S35  
(D4.611 Version 1.0)**

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## Safety-Technical Data Sheet

Important Information for Operators, Users and Fitters

**Introduction:** This nozzle has been developed using the latest state of technology and accomplishes the current national and international safety requirements. This nozzle offers a high degree of operational reliability, thanks to experience of many years in the field, research and development and to a permanent quality control provided in our company. **In normal operation the nozzle is safe.** Nevertheless and in particular if certain operational parameters are not met, there are some potential sources of danger to personnel, material and for the optimal sequence of the operation.

So, these operating instructions are comprising basic safety instructions which are to be observed with regard to the configuration, the operation and the assembling and disassembling of the nozzle. They have to be studied by the operator, user and fitter before assembling or disassembling the nozzle and have steadily to be at the disposal of the aforesaid persons.

### General safety requirements:

- The nozzles have to be used only as per their usage to the intended purpose. Any changes of the operational conditions are to be clarified with the manufacturer.
- A usage to the intended purpose includes also the observance of the various information and instructions of this safety-technical data sheet and of those given in the operating and assembling instructions, as well as the observance of all the regulations of the Employer's Liability Insurance Association.
- The operators have to be familiarized with the method of function and with the handling of the nozzle.
- Installation, configuration, putting-into-operation and disassembling or assembling are to be carried out only by experienced and skilled personnel.
- Operation of the nozzle only by experienced resp. authorized users.
- Conversions and changes of the nozzle to be made only by authorized skilled personnel and after having consulted the manufacturer. Each and every conversions or changes made by other persons or conversions and changes, which have not been agreed with the manufacturer, will lead to a complete exclusion of liability.
- Prior to every putting-into-operation, the following has to be carried out, resp. to be observed:
  - functional test
  - checking, that all the nozzle connections are fitted firmly and tightly
  - labour safety
- The nozzles are exposed to the following kinds of wear and tear:
  - Chemical
  - Thermal
  - mechanical
- Therefore, the nozzles have to be checked regularly and if necessary, to be replaced. **Operation of the nozzles only in a technical perfect condition.**



Do not ever direct the liquid jet or the spray towards persons or electrical appliances. Risk of injury by chemical additives, high pressures, solid agents, current strike. **ATTENTION: In case of media like gas, air or steam, the spray jet is hardly visible.**



The danger exists, that the spray jet will be inhaled. In particular when chemicals or other noxious substances are atomized, remedial measures are to be taken by appropriate steps and devices (e.g. exhaustion, suitable breathing protection). The working area has to be adequately identified by suitable warning symbols.



During the atomizing process, the temperature of the medium/the media to be atomised is to be taken into consideration. The risk of burns or frostbite exists – remedy: suitable protective clothing to be worn.



If media are atomized which are detrimental to health, appropriate protective clothing has to be worn during assembling or disassembling of the nozzle.

- For adjustment, assembling and disassembling of the nozzle, only suitable tools shall be used.  
**ATTENTION: For adjustment, assembling or disassembling of the nozzle, all the pipes have to be depressurized and emptied.**
- Before assembling, the connections have to be cleaned.

In case of a non-professional and/or material appropriate handling of the nozzle, any claim on guarantee is cancelled.

## Operating Instructions for SCHLICK Two-Substance Nozzle Model 940 Form 0 S35 (D4.611 Version 1.0)

### Design characteristics:

The nozzle exhibited static charge. The design, construction and inspection of the nozzle has been carried out in accordance with Directive 2014/68/EU and the AD-2000 legislative body.

### Assembly of the connecting pipes:

- Before connecting the nozzle, the connecting pipes have to be cleaned or to be blown through.
- The propellant (compressed air, steam, gas) has to be connected at the connection marked "air" (connecting thread G 3/8" outside thread) and the liquid at the connection marked "liquid" (connecting thread G 3/8" outside thread).
- Make sure, that the pipes are connected completely tightly.

### Operating conditions:

#### Propellant:

The propellant atomizes the liquid at a minimum pressure of 0,5 bar (g). At a higher pressure of the propellant and during sucking operation, the throughput of the liquid is increased, or under constant throughput (non-sucking), the fineness of atomization is increased. For a precision adjustment of the throughput of compressed air or of gas, respectively for re-adjustment of the former throughput after cleaning, the air cap is equipped with a scale.

- Air cap screwed in completely = air-cap position 0 = nozzle is closed
- then air cap has to be opened by 5 scale lines = air-cap position 5 = standard cap position

Each to application, the required air-cap position has to be determined by tests. By turning the air cap back, the throughput of propellant is reduced and the spraying cone becomes more pointed; by turning the air cap forward, the throughput is increased and the spraying cone becomes larger (under constant pre-pressure of the propellant). Throughputs of the compressed air at various cap positions and pressures: see performance diagram (page 11).

#### Liquid:

The liquid can be sucked, supplied or be fed under pressure. At the liquid side, the throughput can be set within certain limits, by varying the pressure of the liquid or the supply- or the sucking height. Throughput of the liquid (water) under various pressures and bore holes: see performance diagram (page 12).

### Switching-on and switching-off the nozzle:

- When **switching-on**, first the propellant valve has to be opened, then the liquid valve.
- When **switching-off**, first the liquid valve and, to avoid any re-dropping of the nozzle, about 10 seconds later the propellant valve has to be closed.

### Maintenance and cleaning of the nozzle:

In appropriate cycles, depending on the spraying medium, the nozzle has to be checked for any damages, to be cleaned and to be greased slightly.

As detergents, cleaning solvents, cleaning rags, plastic spatula, ultrasonic cleaner or similar means shall be used. No hard objects!

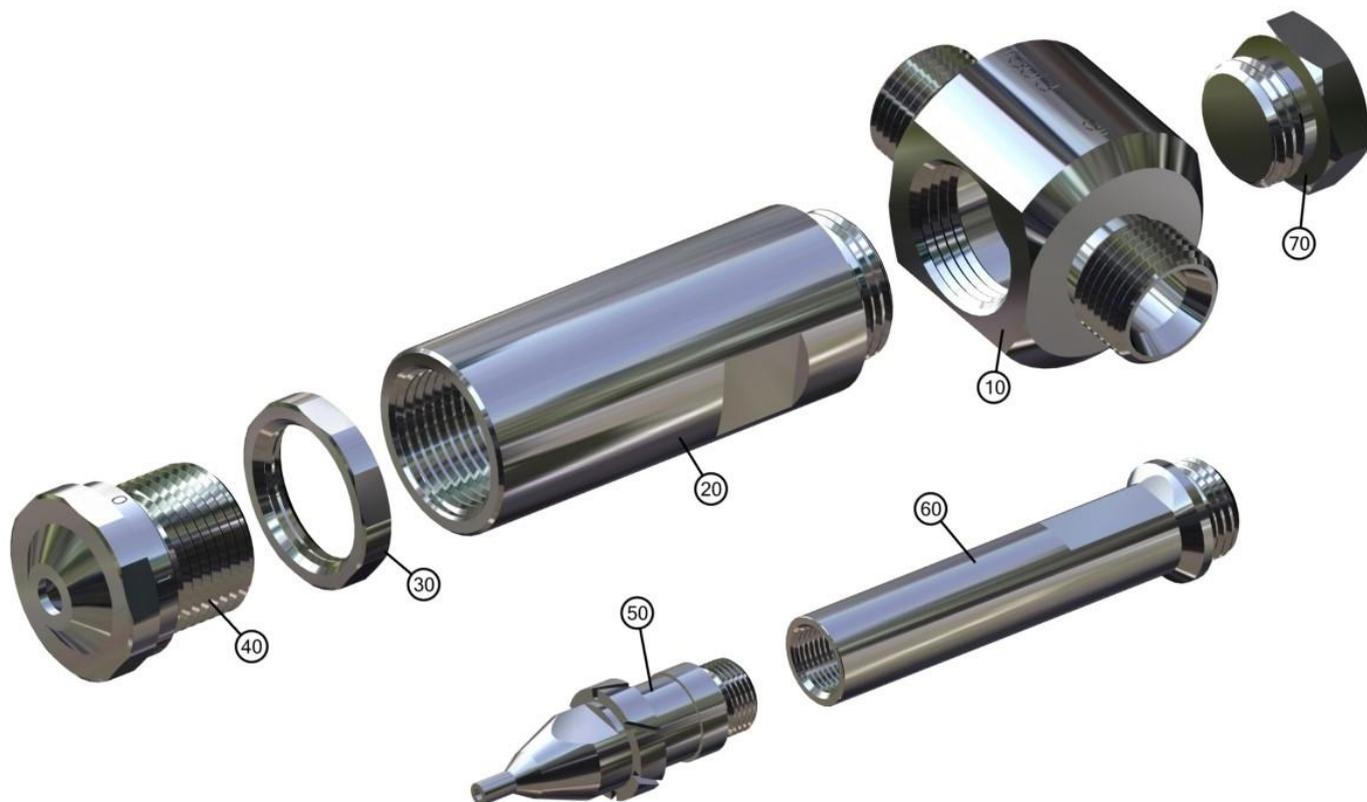
Wearing parts (e.g. O-rings and/or seals) have to be examined optically and exchanged if necessary, while cleaning the nozzle.

### Use only suitable tools!

Before assembly, all threads have to be greased slightly with a suitable lubricant.

Suitable lubricants are available at SCHLICK! Ask for our advice.





ID	Quantity	Name	Item-Number
10	1	Nozzle Body	15479
20	1	Air Pipe	54408
30	1	Locking Nut for Air Cap	24785
40	1	Air Cap	22022
50	1	Liquid Insert	15473
60	1	Liquid Pipe	54409
70	1	Dummy Plug	15584

**Item-Number of the Complete Nozzle: 91492**

SCHLICK-Mod.940/0 S 35 Version 1.0, D 4.611

Bore 1.2 mm

Liquid Insert extended

X = 250 mm

1.4404

## Assembly Instructions for SCHLICK Two-Substance Nozzle Model 940 Form 0 S35 (D4.611 Version 1.0)

### Disassembly:

**CAUTION!** If the nozzle shows any external pollution, it has to be cleaned unconditional before disassembly.  
(Recommendation: Use an Ultrasonic-Cleaner)

Figures in squared brackets represent the parts number of the detail drawing on page 6.

All threads are right-handed threads!

### Required Tools:

Vice with protective jaws made of plastic material

Flat Spanner # 9

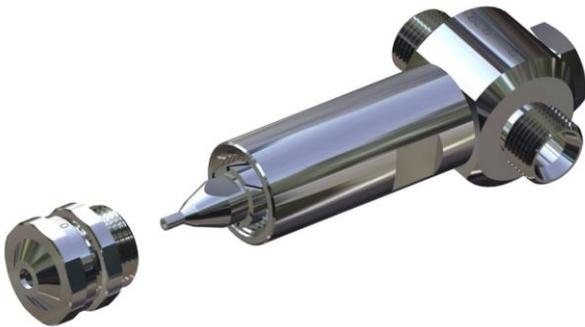
Flat Spanner # 10

Ring Spanner # 20

Flat Spanner # 22

Flat Spanner # 24

1. Chuck the nozzle at the body [10] into a vice with protective jaws made of plastic material.



2. Loosen locking nut [30] (wrench # 24= width across flats) and unscrew air cap [40] (wrench # 24= width across flats) by hand.



3. Unscrew liquid insert [50] (wrench # 9= width across flats).



4. Unscrew dummy plug [70] (wrench # 20= width across flats).



5. Unscrew air pipe [20] (wrench # 22= width across flats).



6. Unscrew liquid pipe [60] (wrench # 10= width across flats).

**Use only suitable tools!**

For **re-assembly** of the nozzle the steps 1. – 6. have to be carried out in reversed order.

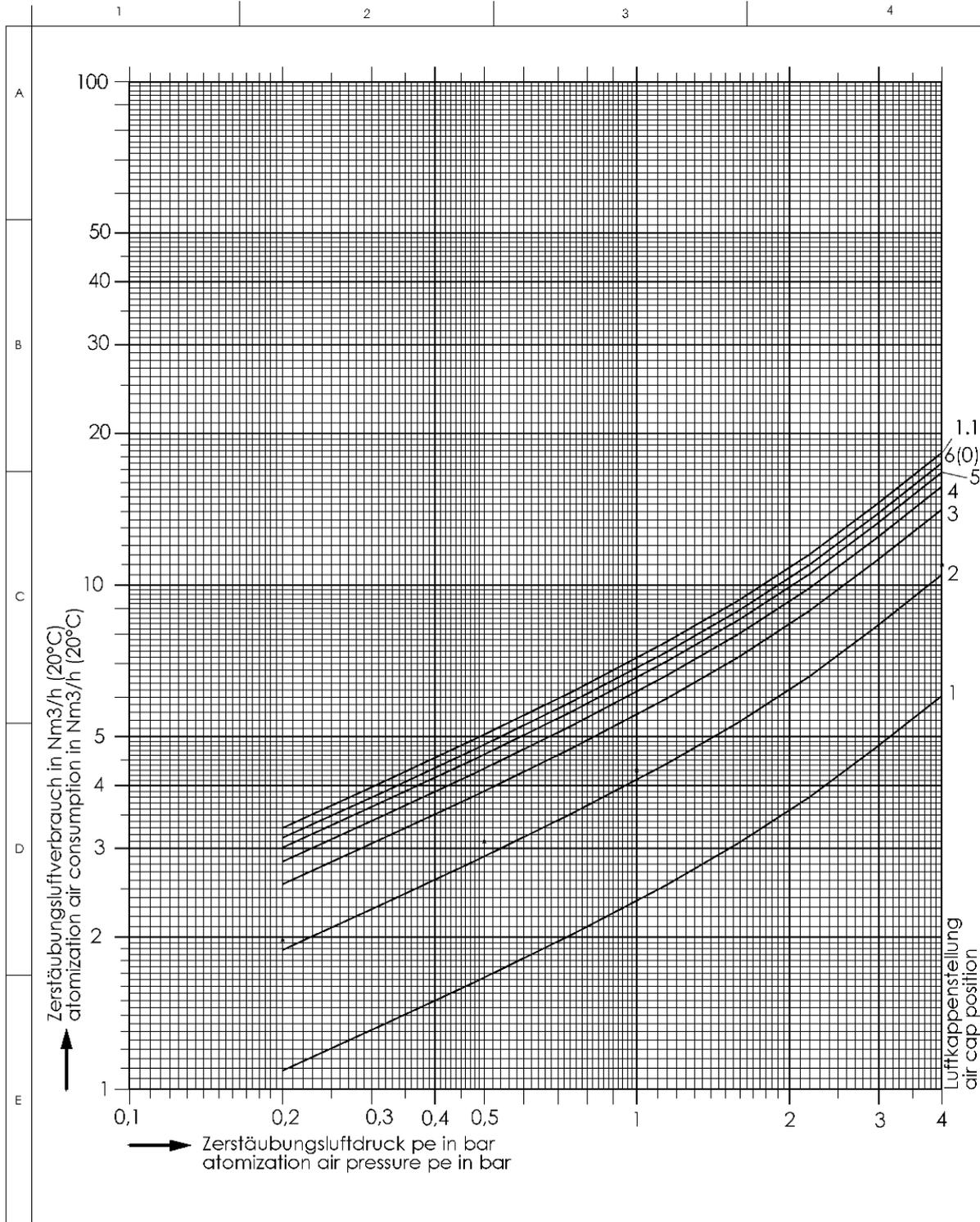
Do not clean the nozzle with any hard objects, use only plastic spatula, cleaning solvents, cleaning rags, ultrasonic cleaner etc.

Before assembly all threads have to be greased slightly with a suitable lubricant. Suitable lubricants are available at SCHLICK!  
Ask for our advice.

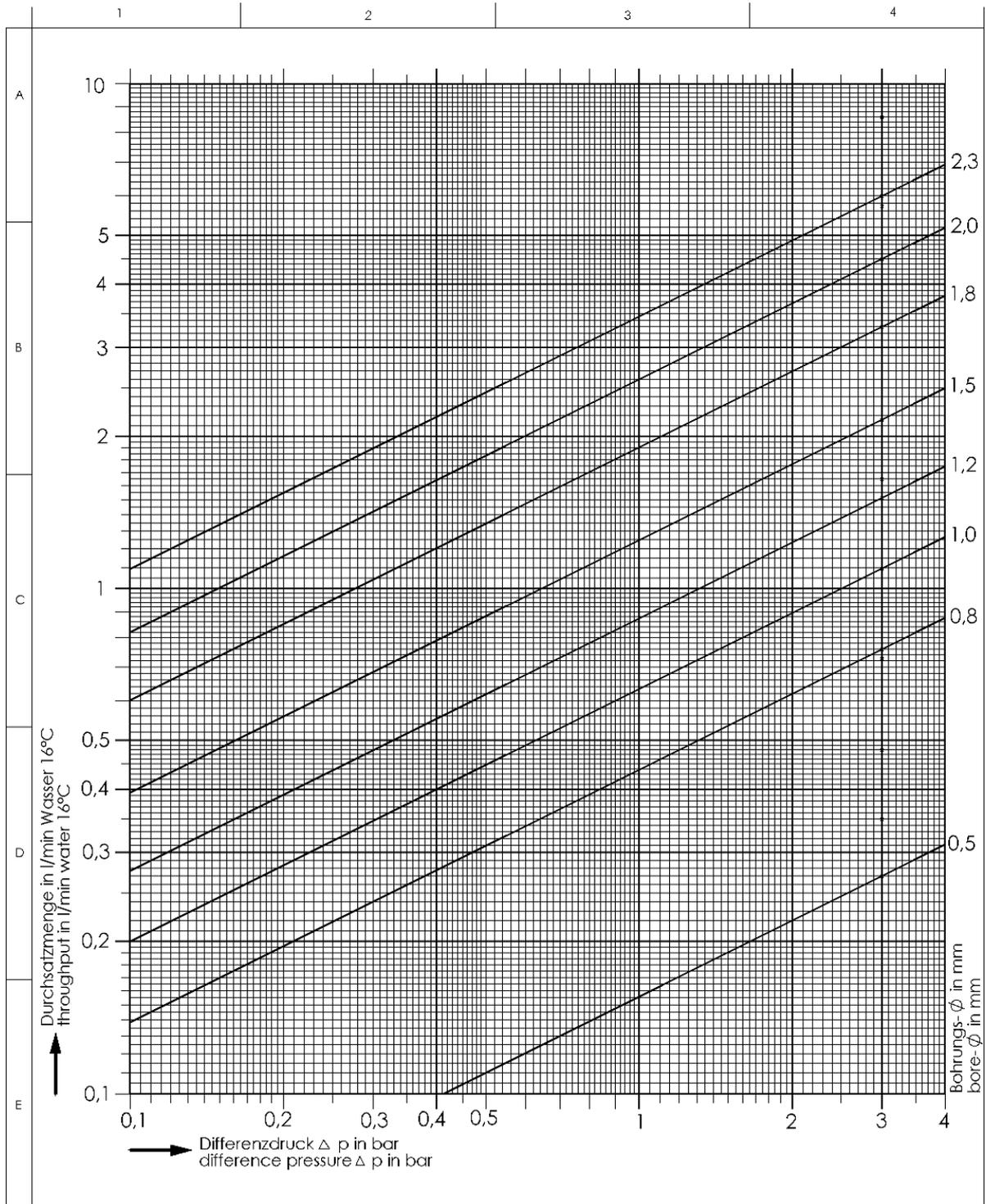
**Error-Checklist:**

Problem	Reason	Elimination
Spray pattern shows strings and/or is uneven	Liquid insert and or air cap polluted	Cleaning of the appropriate part
	Liquid insert and/or air cap damaged (scratches, deformation on the outlet-bores etc.)	Replace appropriate part
"Sputtering" spray pattern	Liquid insert not tightened enough	Check liquid insert for a tight fit
	Liquid pipe not tightened enough	Check liquid pipe for a tight fit
	Sealing surface(s) of the liquid insert, liquid pipe or nozzle body damaged	Replace appropriate part





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<p>© Düsen-Schlick GmbH</p>		<p>T 940 4-100 L 0 0</p>
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Leistungsdiagramm  
Modell 940/0

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