SCHLICK Two-Substance Nozzle Model 827 Form 1 (D4.510 Version 1.1)

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Register

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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.

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Operating Instructions for SCHLICK Two-Substance Nozzle Model 827 Form 1 (D4.510 Version 1.1)

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 front connecting nipple (connecting thread G ½" outside thread) and the liquid has to be connected at the rear connecting nipple (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). The consumption of propellant is depending on the position of the spindle and on the pressure of the propellant. At a higher pressure of the propellant and during sucking operation, also the throughput of the liquid is increased, or under constant throughput of the liquid (non-sucking), the fineness of atomization is increased.

Setting of the throughput of the propellant:
Normal spindle position: The front edge of the spindle locks concisely with the rear edge of the cylindrical bore in the body.
Each to application, the necessary spindle position has to be determined by tests. By turning the spindle forward, the throughput of propellant is reduced and the spraying cone becomes more pointed; by turning the spindle back, both, the spraying cone and the throughput of the propellant become bigger (under constant pre-pressure of the propellant). Throughputs of compressed air resp. steam at various spindle positions and pressures: see performance diagrams (pages 12 + 14).

Liquid:
The liquid has to be fed under pressure. At the liquid side, the throughput can be set within certain limits, by varying the pressure of the liquid, or by varying the position of the adjusting needle under a constant pressure of the liquid. By means of the adjusting needle, the throughput of the liquid is steplessly adjustable from 0 to maximum, independent of the prevailing pre-pressure. Maximal throughputs (water)– see performance diagram (page 13).

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 has to be closed and then about 10 sec. later and in order to avoid any re-dropping of the nozzle the propellant valve.

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.

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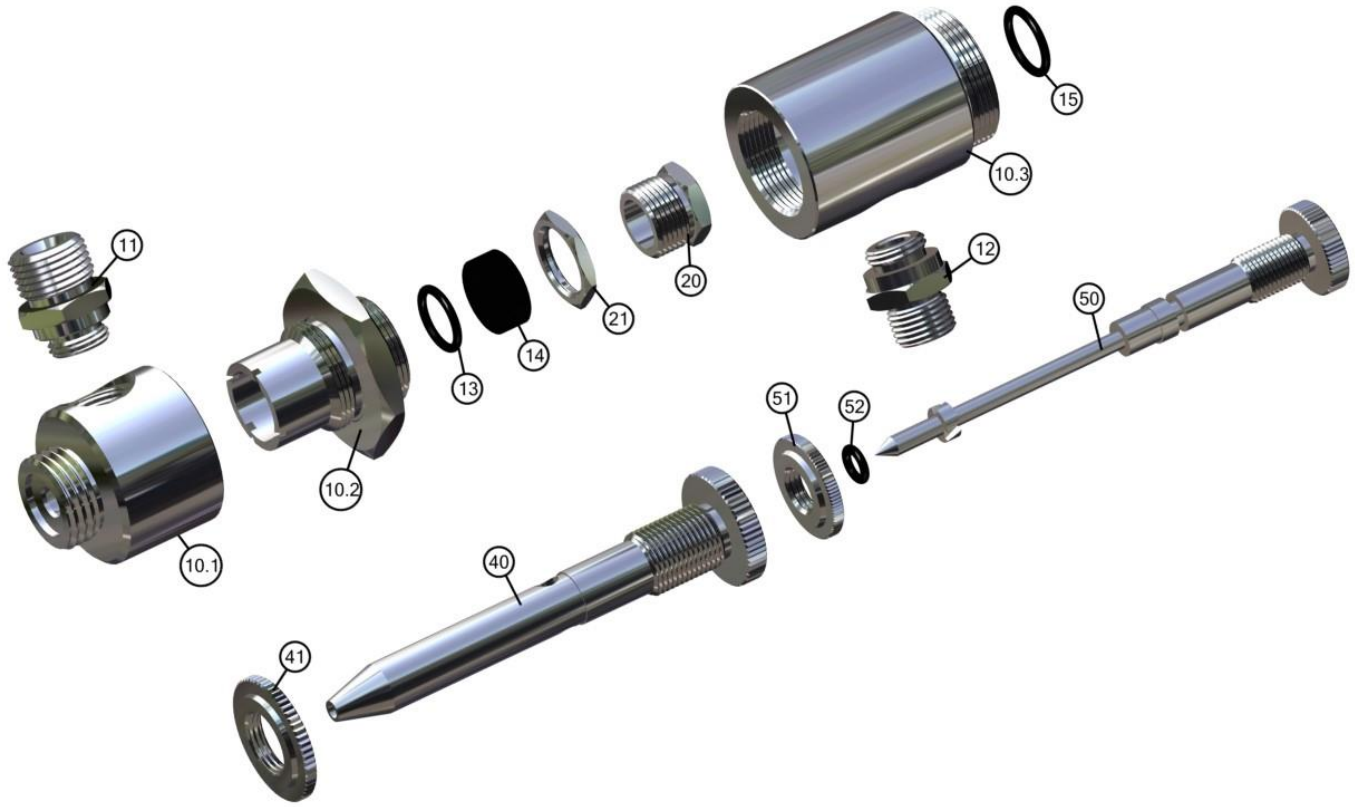
Recommended accessories:

SCHLICK-Lubricant Paraliq GTE 703; **Item-Number 76738 (FDA approved, up to 150°C / 300°F)**

Lubricant OKS 250; **Item-Number 54249 (up to 1400°C / 2550°F)**

incl. special tool for gentle and nearly nondestructive disassembly of O-Rings

SCHLICK-Nozzle Cleaning Set; **Item-Number 53066-2**



ID	Quantity	Name	Item-Number
10.1+10.2+10.3	1	Body (Air) with Twist Insert (Air) and Body (Liquid)	58778
11	1	Connecting Nipple (Air)	15175
12	1	Connecting Nipple (Liquid)	15177
13	1	O-Ring for Twist Body	88856
14	1	Gland	50246
15	1	O-Ring for Body (Liquid)	40053
20	1	Gland Screw	15170
21	1	Locking Nut for Gland Screw	15171
40	1	Spindle, Bore 4.0 mm	15193
41	1	Locking Nut for Spindle	23686
50	1	Adjusting Needle	21747
51	1	Locking Nut for Adjusting Needle	15194
52	1	O-Ring for Adjusting Needle	39045

Numerical combined parts (10.1 + 10.2 + 10.3) are only available as a unit and not as single part!

Item-Number of the Complete Nozzle: 20794
SCHLICK-Mod.827/1, D 4.510 Version 1.1, (without Protection Cap)
Bore 4.0 mm
O-Ringe EPDM/FDA
1.4404

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Assembly Instructions for SCHLICK Two-Substance Nozzle Model 827 Form 1 (D4.510 Version 1.1)

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

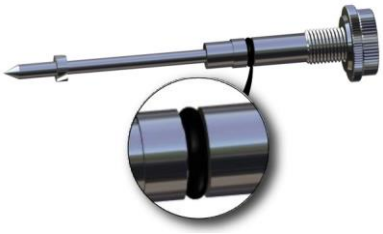
Figures in squared brackets represent the parts number of the detail drawing on page 6.

All threads are right-handed threads!

Required Tools:
Vice with protective jaws made of plastic material
Flat Spanner # 20
Flat Spanner # 24
Flat Spanner # 46

1. Chuck the nozzle at the body (air) [10.1] into a vice with protective jaws made of plastic material.

2. Loosen locking nut for adjusting needle [51] by hand.



3. Unscrew adjusting needle [50] by hand and withdraw it from nozzle. Check the O-ring [51] of the adjusting needle for any damages and replace it, if necessary.

4. Loosen locking nut for spindle [41] by hand.

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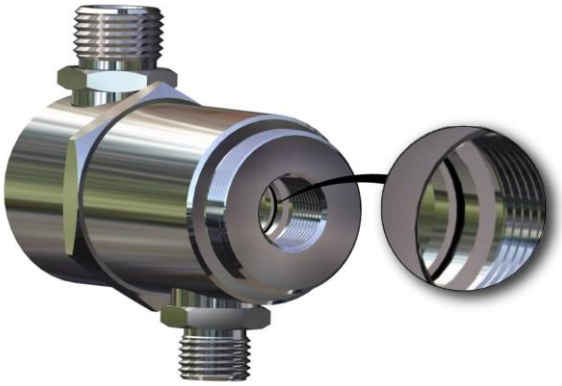
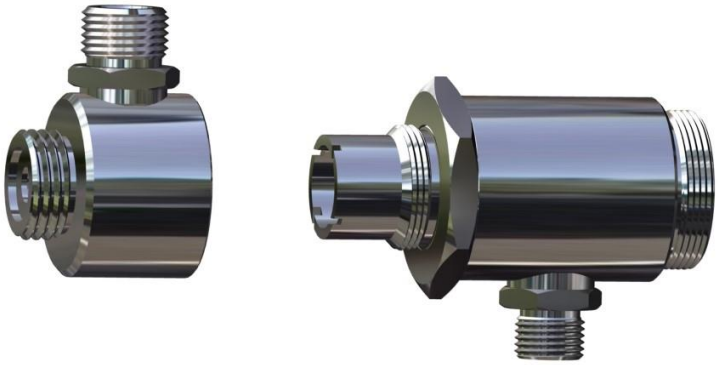
5. Unscrew spindle [40] by hand and withdraw it from nozzle.

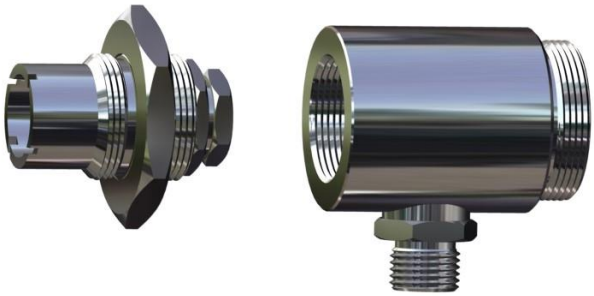


6. Check the O-Ring [15] inside the body (liquid) [10.3] for any damages and replace it, if necessary.



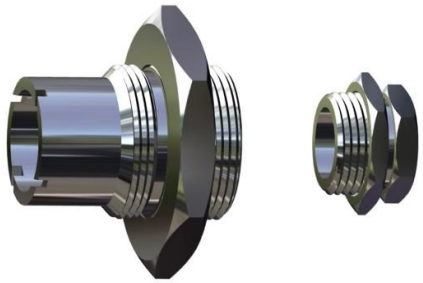
7. Unscrew twist insert (air) [10.2] (wrench # 46= width across flats) incl. body (liquid) [10.3] from body (air) [10.1].

8. Chuck body (liquid) [10.3] into a vice with protective jaws made of plastic material.

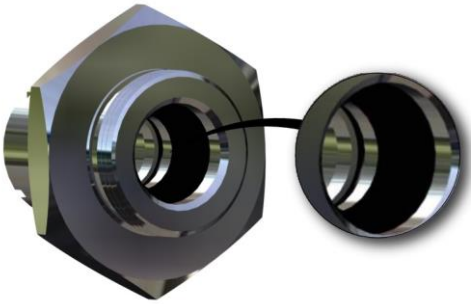


9. Unscrew twist insert (air) [10.2] (wrench # 46= width across flats).

10. Chuck twist insert (air) [10.2] into a vice with protective jaws made of plastic material.



11. Loosen locking nut for gland screw [21] (wrench # 24= width across flats) and unscrew gland screw [20] (wrench # 20= width across flats).



12. Check the O-ring [13] and the gland [14] inside twist insert (air) [10.2] for any damages and replace them, if necessary.

Use only suitable tools!

For **re-assembly** of the nozzle the steps 1. – 12. 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.

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Error-Checklist:

Problem	Reason	Elimination
Spray pattern shows strings and/or is uneven	Spindle and/or body polluted	Cleaning of the appropriate part
	Spindle and/or body damaged (scratches, deformation on the outlet-bores etc.)	Replace appropriate part
“Sputtering” spray pattern	Screw for packing gland not tightened enough	Re-tighten screw for packing gland
	Gland and/or O-Ring [14] damaged	Replace appropriate part
Propellant medium leaks from body for liquid	O-Ring [15] damaged	Replace O-Ring

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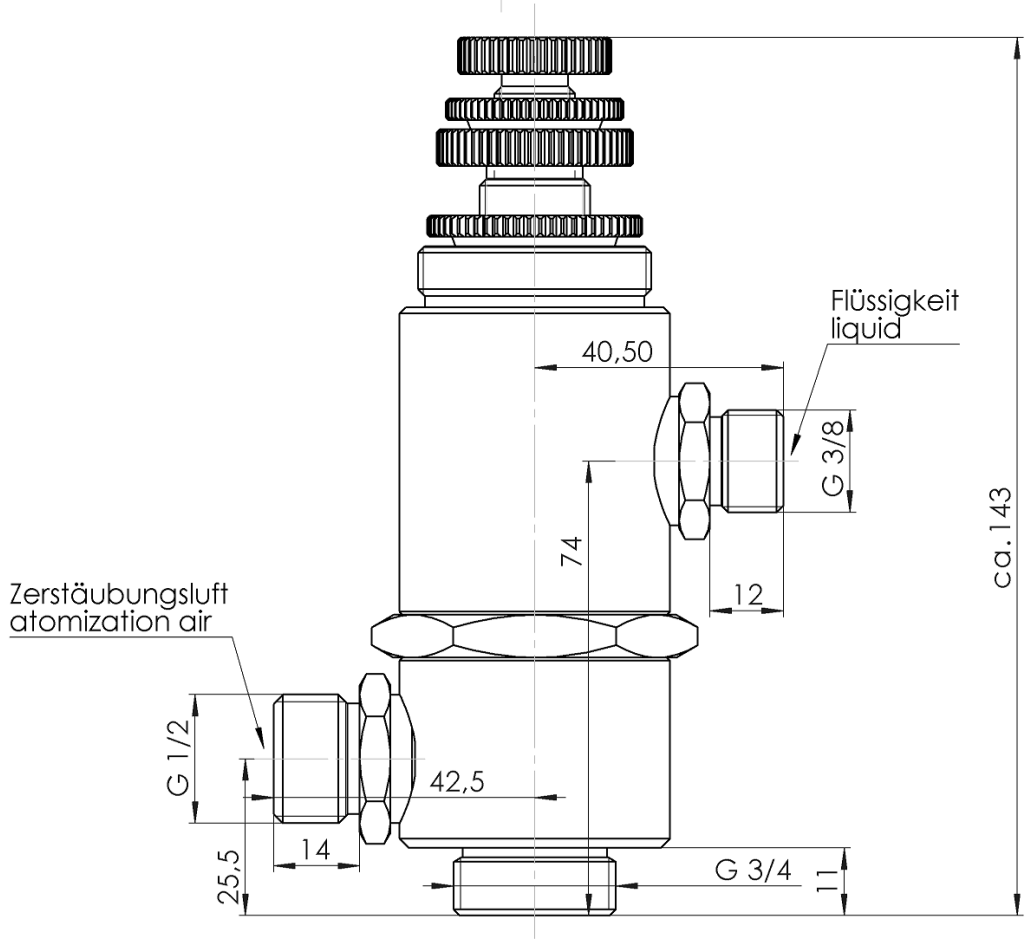

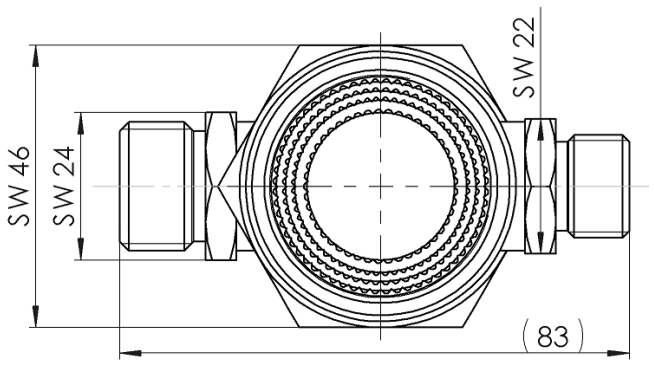

Urpsrung/ Alte ZG-Nr.:	ähnl. D4.510 Vers.1.0
Werkstoff:	siehe Einzelteile
Gewicht/g:	1236.59
Maßstab:	1:1
	DIN A4
	143/46/83

DIN ISO 128-30

SCHLICK-Zweistoffdüse
SCHLICK two-substance nozzle

Modell (model) 827 Form 1

Version 1.1

D4.510

Seite 1

	Datum	Name
Bearb.	22.10.2018	MK
Gepr.	22.10.2018	SB
Freigeg.:	22.10.2018	SB

Nr.	Änderung	Datum	Name

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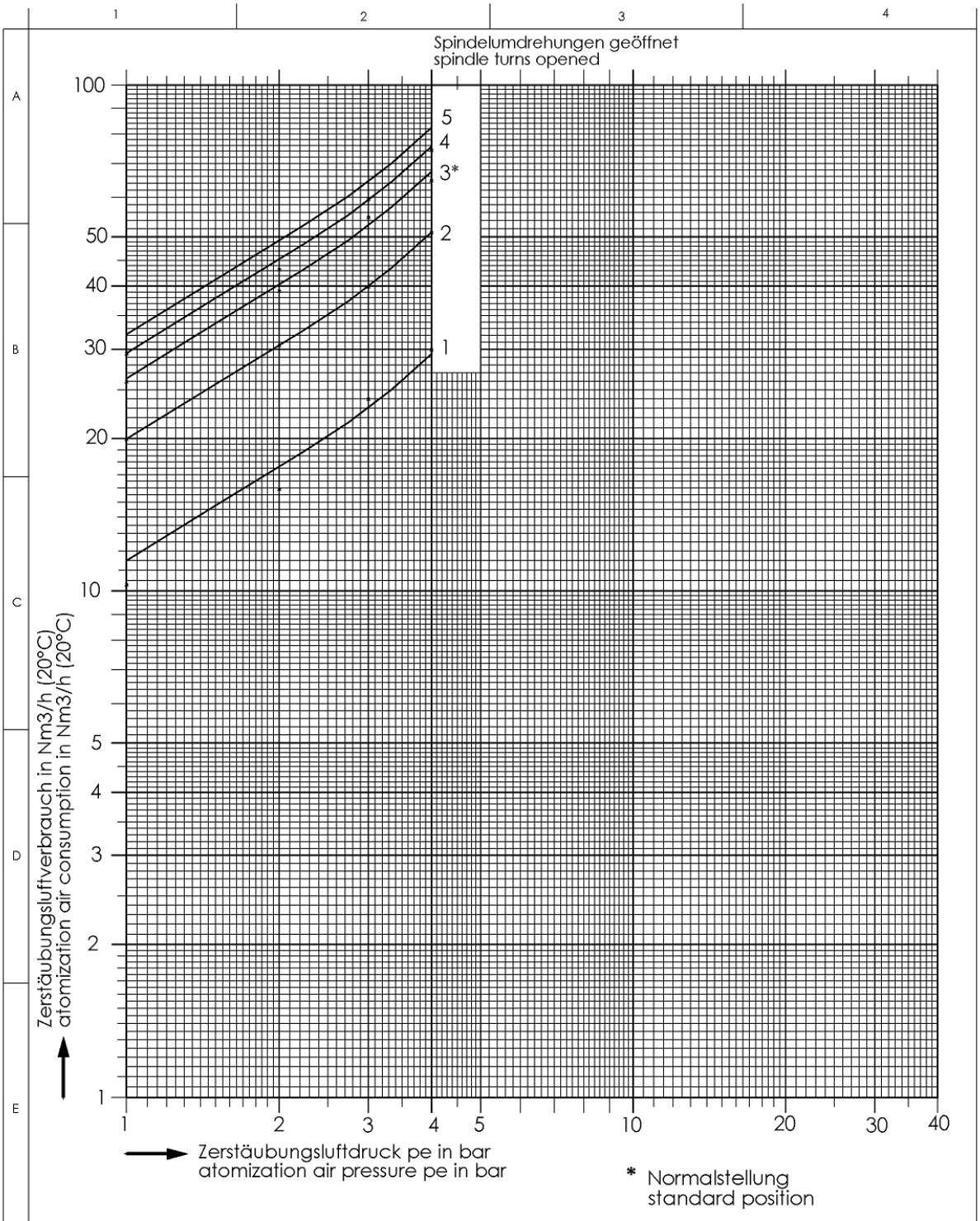

418

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Leistungsdiagramm Modell 827/1

diagram model 827/1

T 827/1 40-100 L 0 0

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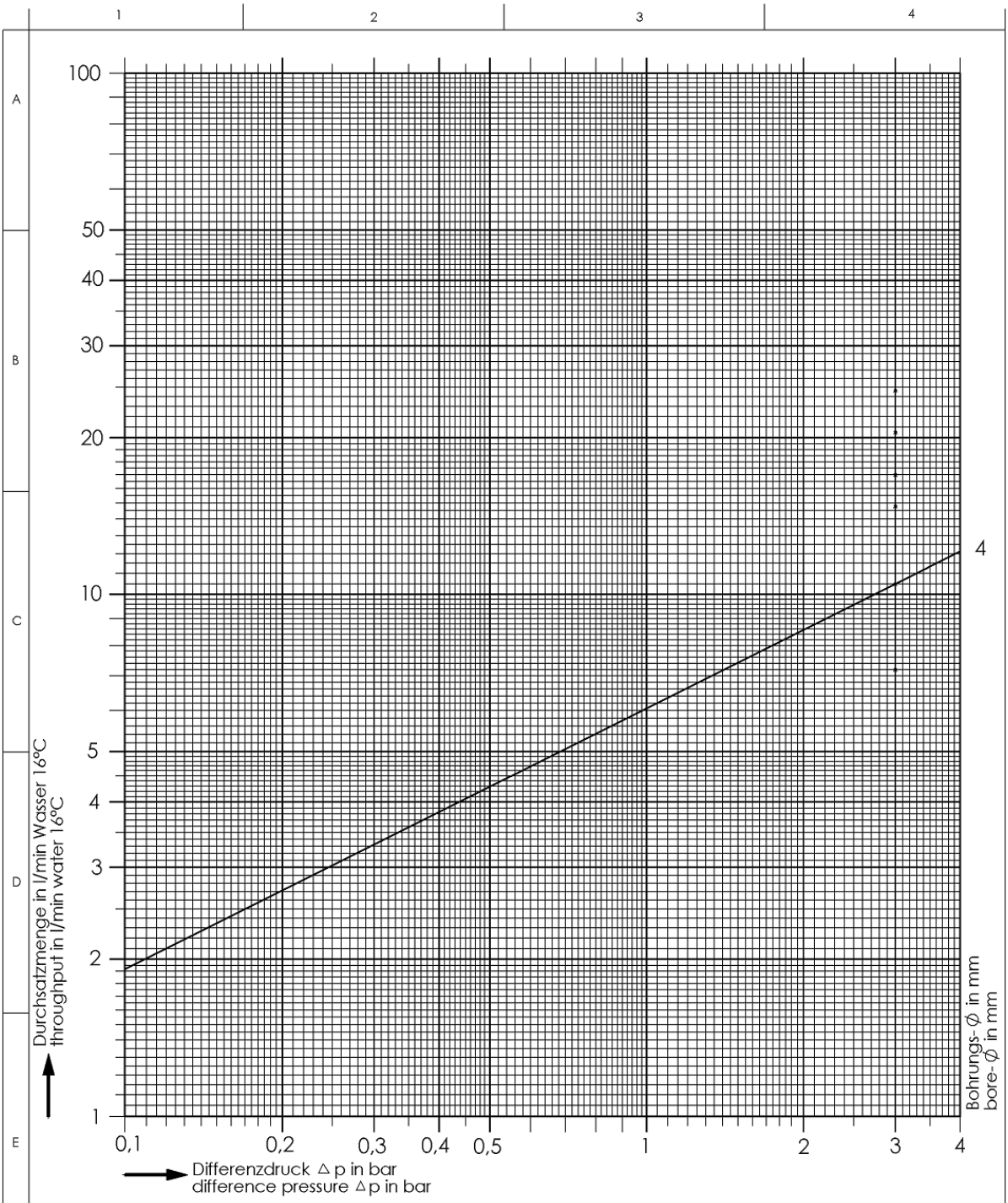

422

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Leistungsdiagramm Modell 827/1 diagram model 827/1

T 827/1 4-100 W 0 0

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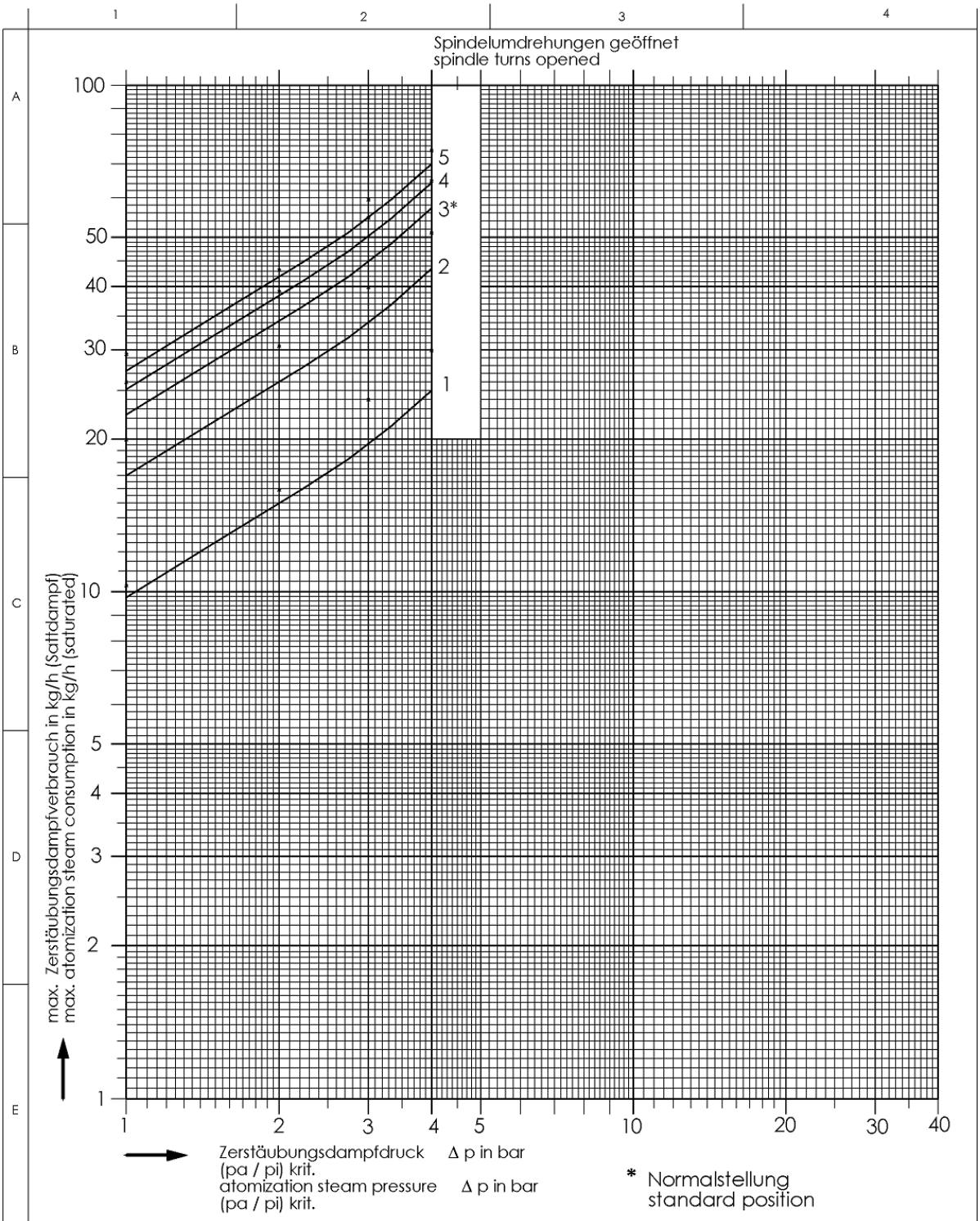

417

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Leistungsdiagramm Modell 827/1

diagram model 827/1

T 827/1 40-100 D 0 0

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Ursprung:

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