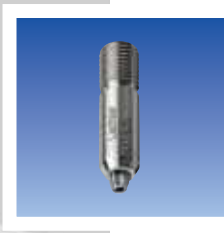
ENGINEERING
YOUR SPRAY SOLUTION

Air Nozzles and Accessories






Air Nozzles

LECHLER AIR NOZZLES – QUIETLY EFFICIENT

Lechler is a world leader in nozzle technology. For over 135 years, we have pioneered numerous groundbreaking developments in the field of nozzle technology. Comprehensive nozzle engineering know-how is combined with a deep understanding of application-specific requirements to create products that offer outstanding performance and reliability.

Leading nozzle technology for compressed air

In many industrial and craft fields, compressed air is an essential aid for drying, cooling, cleaning, transporting, loosening, and mixing. At the same time, the use of compressed air also increases costs and high noise emissions. The critical factor here is the type of nozzle used.

Industries

- Metalworking industry
- Food industry
- Packaging industry
- Electronics industry
- Semiconductor industry
- Plastics industry
- Printing/coating/painting, etc.

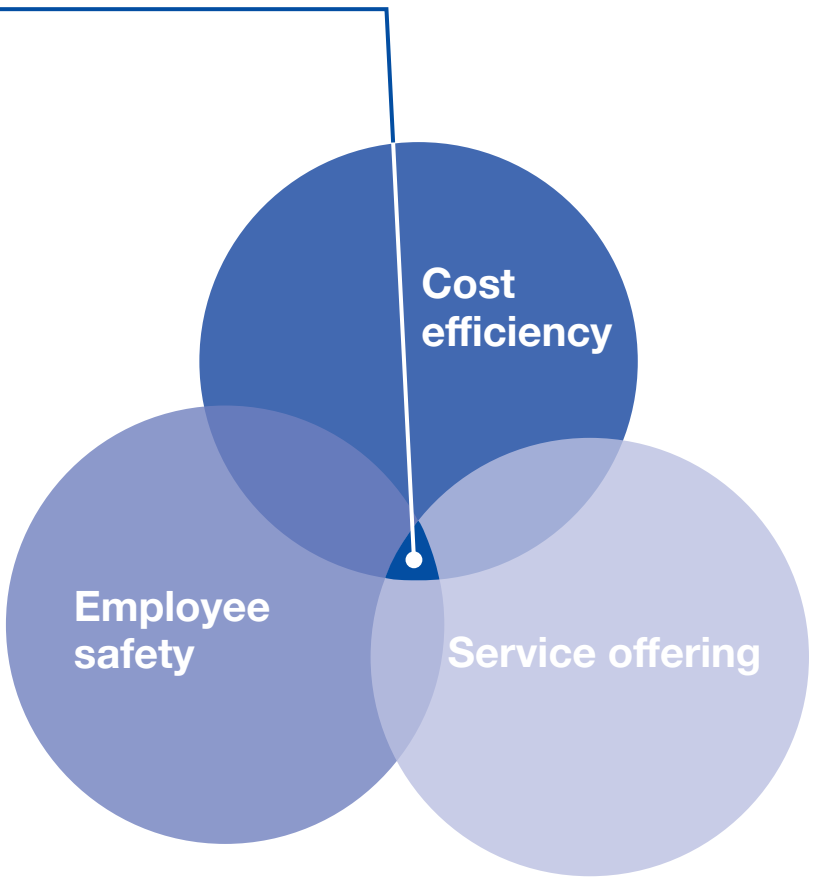
Your competent partner – worldwide

Lechler is headquartered in Metzingen, Germany but is represented all over the world with subsidiaries in the USA, Hungary, England, India, China, France, Belgium, Sweden, Finland, Spain and Italy as well as qualified agents in over 40 countries. We will help you solve your compressed air tasks – wherever you are in the world.

Your advantages

- Reduced noise level
- Lower operating air pressure with same blowing force
- Lower air consumption
- Improved blowing efficiency over larger distances
- Lower operating costs

THREE ADVANTAGES FOR YOU



Cost efficiency

Lechler nozzles make it possible to reduce compressed air consumption by up to 45%, in comparison with open pipes. Furthermore, increasing energy costs and the growing range of applications for compressed air become more evident for the impressive potential savings possible in this area. This is a competitive benefit that has a direct positive impact for your business.

Employee safety

The unique design of our nozzles allows the noise level to be significantly reduced by up to 25 % in comparison with conventional solutions. This also reduces noise-related stress for your employees. Since concentration falls as a result of increased stress, use of low-noise nozzles has a positive effect on production quality.

Service offering

A perfect solution must be optimally tailored to the exact requirements. We will therefore gladly advise you in person about the use of compressed air nozzles and introduce you to new possibilities. Contact us and let us define the best possible solution together for improved quality and optimized process reliability.

CONTENT

LECHLER AIR NOZZLES HAVE PROVEN THEMSELVES IN MANY INDUSTRIES

Cleaning/blowing off

Lechler Whisperblast® nozzles are preferred over conventional air nozzles due to their low noise levels. The nozzles are very frequently used for blowing off debris. Both permanently installed solutions or a connection to a compressed air gun are possible.

Cooling

In addition to cooling by water, surfaces can also be cooled by air and other gases. The noise level can be reduced even further by means of multi-channel air nozzles. The width of the multi-channel nozzles means that air can be supplied more uniformly to the surface when the nozzles are correspondingly positioned, (i.e.) for cooling components after ultrasonic welding.

Drying

Whisperblast® nozzles remove unnecessary liquid drops, e.g. from bottle necks, so that the attached label can be applied optimally.

Selecting/sorting

Air nozzles can also be used for selecting and sorting applications by operation with short pulses. The picture shows an example from the food industry. Here, bakery buns are being rejected because they do not pass requirements.

Ionizing

Air nozzles are used in the semiconductor industry to supply ionized air to the manufacturing process. This prevents the buildup of static electricity.

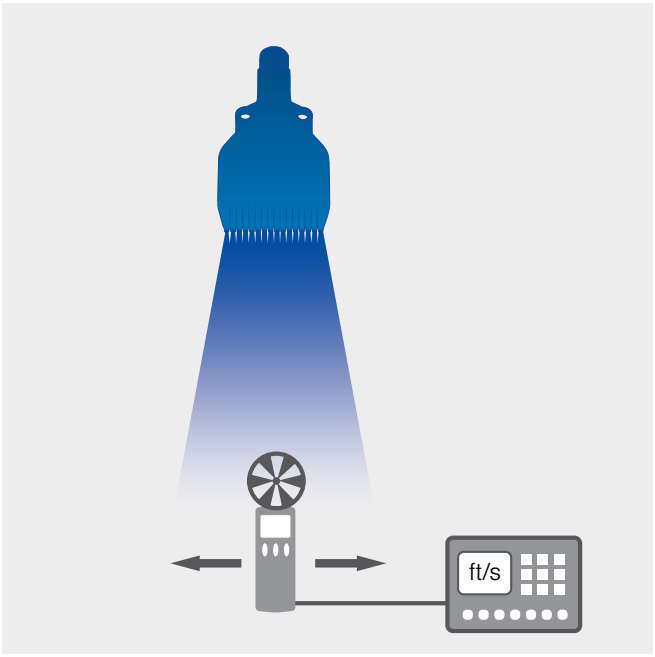
Air curtain

If Whisperblast® nozzles are arranged closely together, it is possible to create a closed air curtain. The illustrated test with water clearly shows gap-free swirling at the surface. In summary, this means that dust and other fine particles can be kept away from a certain area.

These are just a few of the possible applications. If your specific application is not listed, please contact us. We will gladly advise you.

MODERN NOZZLE TECHNOLOGY FOR GREATER EFFICIENCY AND LESS NOISE

Spray pattern measurement

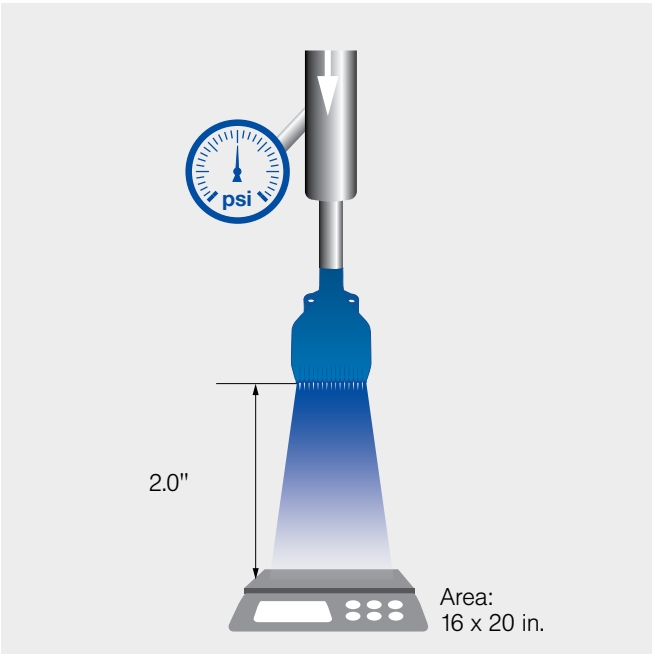


Larger measurable spray pattern

For the spray pattern measurement, the nozzles are clamped in a fixture specially designed for this purpose. An anemometer (windmeter) moves through the air spray at right angles to the jet direction at previously defined distances and at different pressures. The wind speeds measured here define the spray (as specified on the product pages). An air speed of 2.5 m/s was defined as the limit value on the basis of experience and flow calculations (CFD).

The compact design and unique form of our air nozzles allow for extremely high speeds at close range as well as at larger throw distances.

Blowing force

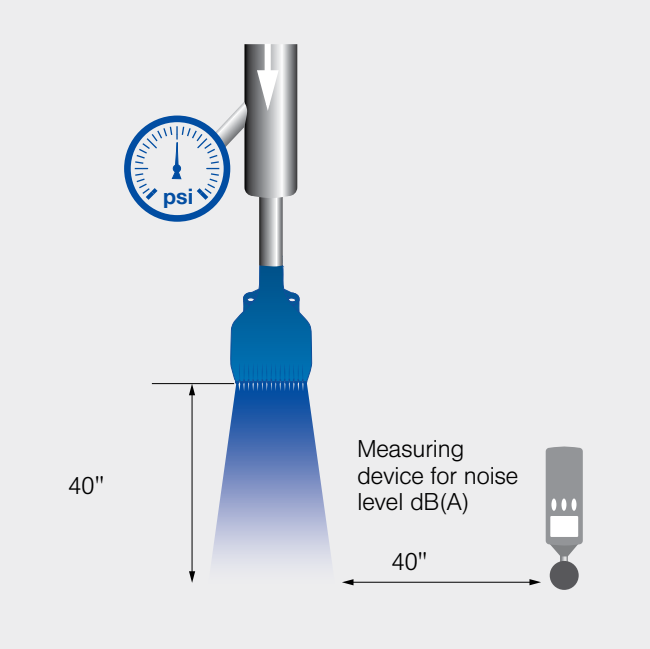


Higher measurable blowing force

In performance, the available blowing force is critical. Our measurements show that Lechler multi-channel nozzles achieve a high blowing force even at large distances. Thanks to this benefit, our nozzle technology opens up new applications for use with compressed air.

Compared with conventional solutions, the competitive advantage that can be realized with Lechler nozzles is evident again.

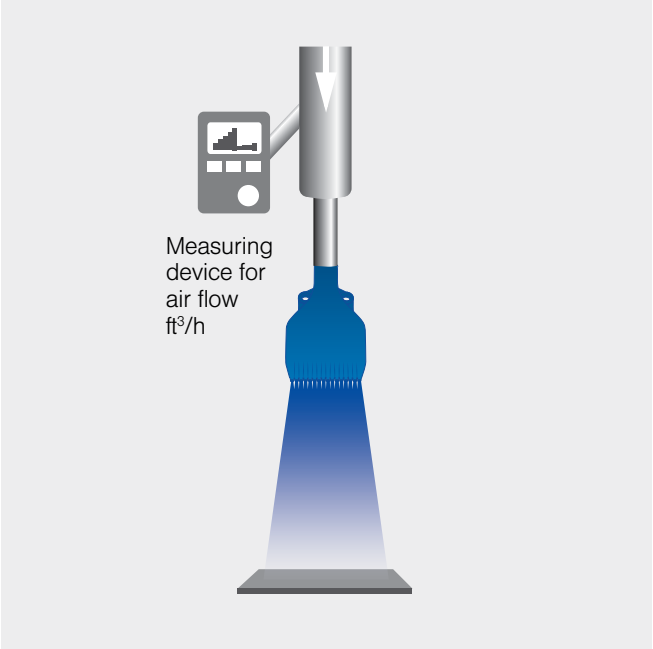
Noise level



Less measurable noise

Conventional air nozzles simply blow air through a hole. The resulting turbulence generates unpleasant, loud hissing noises. Such noises can trigger stress reactions among employees even at relatively low sound pressure levels, thereby impairing both concentration and performance.

Air consumption



Lower measurable air consumption

The generation of compressed air requires energy. Since the energy costs account for an increasingly large share of the overall costs of manufacturing a product, considerable savings can be achieved through the right nozzle selection.

Nozzles from Lechler are designed so that they need less compressed air than conventional nozzles, without compromising performance. As a result, our products help to make production processes more efficient and more environmentally friendly.

WHAT YOU SHOULD KEEP IN MIND WHEN PLANNING

① Difference between blowers and compressors

If the term BLOWER is used in fan technology, this normally describes equipment that delivers large gas quantities at low pressures. In contrast, a COMPRESSOR delivers low volume flows at high pressures.

Blowers are often used to make extraction and ventilation processes more efficient, e.g. to guarantee the supply of oxygen in combustion processes. In contrast, compressors are frequently used in everyday life. Whether it is inflating car tires or blowing off metal chips on a drill, compressors are used in a host of applications.

Lechler air nozzles make it possible to perform many different blowing-off and cleaning operations easily, efficiently and with low noise.

② Spray pattern of air nozzles

Air nozzles are used for concentrated, targeted delivery of air or other gases. The nozzles used are normally flat jet or round jet nozzles. Air is also discharged at a specific angle. However, this is not comparable with that of liquids.

Air expands when it is discharged from the nozzle orifice, which leads to expansion of the jet. The spray angle is normally approx. 20°.

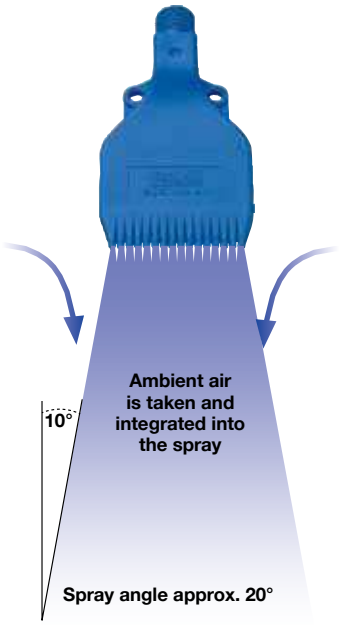


Figure 2: Spray expansion of an air nozzle

③ Innovative nozzle design

With conventional air nozzles, air is simply blown through a hole. The produced turbulence creates loud hissing noises. With our specially designed multi-channel air nozzles, we are able to focus and reduce this turbulence. The specially shaped orifices guide the supplied air uniformly into arranged air channels to ensure optimum flow behavior. This produces a uniform, aligned and powerful air stream. The decrease in turbulence results in lower noise emissions and also measurably reduces air consumption.

④ Materials and connections

Our standard materials for metal nozzles are brass and stainless steels: AISI 303, AISI 316L or AISI 316Ti.

Standard nozzles made of plastic are usually made from PP, PVDF or POM.

It is also important to choose the optimum material for seals. Viton, PTFE, EPDM or EWP are used, depending on the application.

Nozzles are manufactured primarily with threads according to ISO 228, DIN EN 10226 and NPT. A distinction is also made between sealing and non-sealing threads. In the case of non-sealing threads, PTFE tape or thread paste is used for sealing.

Lechler nozzles meet many different requirements of international organizations – including food grade compatibility and occupational safety.

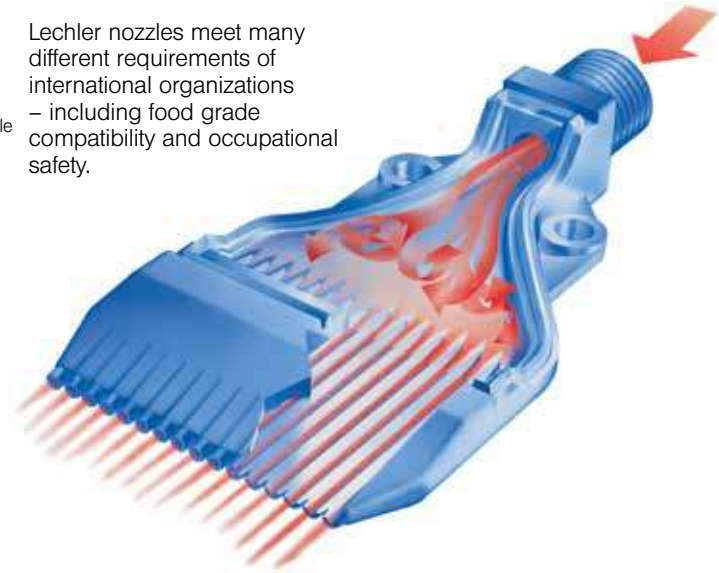
The FDA, the U.S. Food & Drug Administration, is a federal agency which overseas those two industries. Materials used in making Lechler products are compliant with the requirements of FDA regulation 21 CFR for use in food applications.

The regulation (EC) No. 1935/ 2004 of the European Parliament regulates general safety requirements to all food and beverage contact materials.

Within this regulation, it is additionally stipulated that plastics must comply with (EU) 10/2011.

The Occupational Safety and Health Administration (OSHA) is a US federal authority for prevention of accidents at work.

The respective logo on the product pages indicates which requirements are met.



WHAT YOU SHOULD KEEP IN MIND WHEN PLANNING

⑤ Gases

The output of gases (i.e. air) is fundamentally different to the output of liquids. Gases are compressible fluids, whereas liquids are considered as incompressible fluids.

Gases can be supplied with practically all nozzles that can also be used for atomizing liquids. However, due to the compressibility and lower density of gases, gas sprays cannot be formed in the same way as with liquids. Gases tend to generate a significantly increased noise level under certain conditions (pressure and nozzle design).

The development of multi-channel nozzles with specially shaped nozzle orifices makes it possible to considerably reduce the turbulence in the nozzle that causes noise. In addition, this nozzle design increases blowing force while at the same time reducing air consumption.

The speeds of gases can be very high under certain conditions. If a specific pressure difference is applied to a nozzle, speeds of approx. 1050 ft/s can often occur in the smallest cross section. This speed can even increase shortly after the gas leaves the nozzle. The illustration below shows the speed characteristic in a flow simulation.

⑥ Operating medium steam

In general, steam must be considered as a gas. However, in certain cases, it must be treated differently to (i.e. air), especially with regards to flow characteristics. Since water is actually liquid under normal conditions, it changes its state of aggregation only subject to certain prerequisites; this means that the flow and thermodynamic properties of steam differ from those of gases. For example, the throughput of steam is always specified as a mass flow in practice. In contrast, gas throughputs are often specified as volume flows. However, one of the most important properties of steam is its density, (i.e.) maintenance of its gaseous state. If steam is pressurized, it can quickly lose its gaseous state at a given temperature and change to liquid state. This can already take place at moderate pressures and temperatures. Particular attention must be paid to this and other physical-chemical properties if it is desired to use steam as a medium for nozzles.

⑦ Cost savings and noise reduction in comparison to an open pipe

The use of compressed air has long been standard in companies. Whether for blowing off debris, sorting out defective parts or simply for drying products after washing. Companies frequently use simple pipes for this purpose. These can be purchased inexpensively and individually shaped and aligned for the specific application.

However, this may appear to be an inexpensive solution but usually is very uneconomical in the long run. Thanks to their unique design, the air consumption and noise level of Lechler air nozzles are significantly lower than for comparable open pipes with equivalent bore diameter. The use of Lechler air nozzles is not only a cost savings but it also protects the health and safety of your employees.

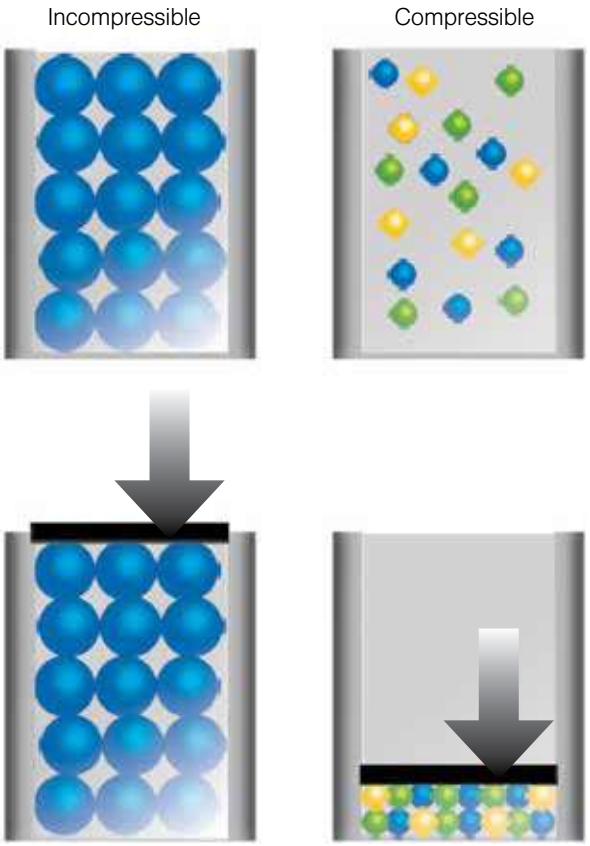


Figure 3: Compressibility behavior: Left water / right air

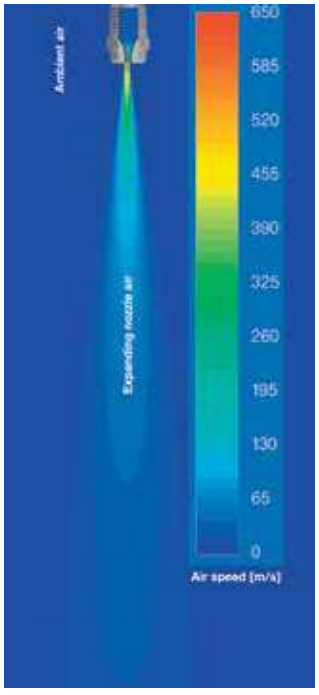


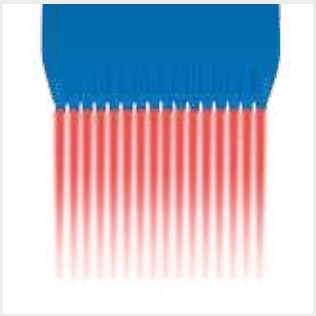
Figure 4: Representation of the speed curve of outflowing air

Multi-channel flat jet nozzles for air Whisperblast®, plastic versions Series 600.130.S2/56

Extremely silent!

Series 600.130.S2/56

The multi-channel flat jet nozzles of the 600.130 series generate a continuous powerful air stream. The noise level and air consumption remain low even at higher air pressures. Since the nozzles are made completely of POM or natural PP, they are also suitable for applications in the food industry or electroplating sector.



* Complies with OSHA requirements on noise level

Cost savings	**21 %**
Noise reduction	**24 %**

Materials
Natural PP and POM

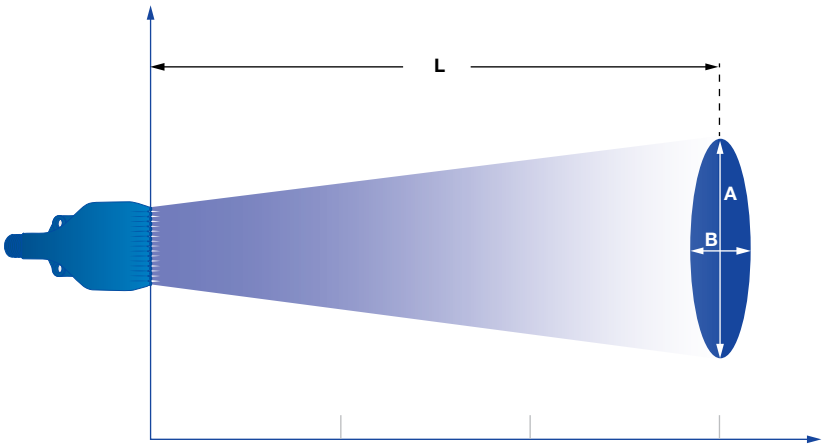
Blowing force
.45 LBF at 29 psi

Noise level
70 db(A) at 29 psi

Air consumption
V_{LN}=10 SCFM at 29 psi

Pressure
P_{max} = 87 psi

Max. temperature
Natural PP: 60°C/ 140°F
POM: 50°C/ 122°F

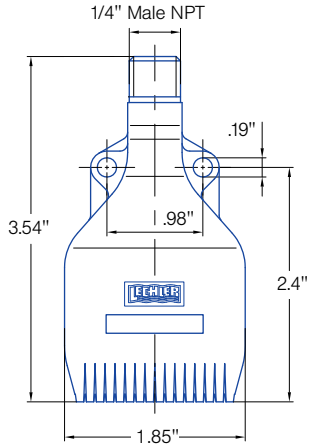


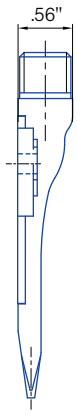
Jet pattern of 600.130 nozzle series

Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	24	35	35

Jet dimensions at L

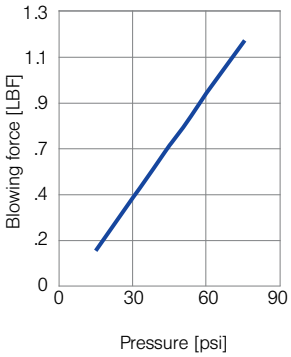
A [in]:	5.5	9.4	10.2
B [in]:	5.1	7.3	8.7

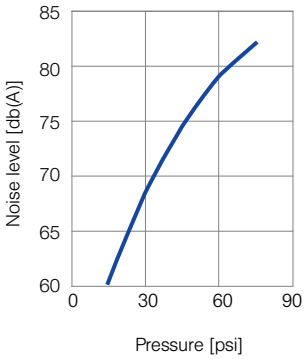


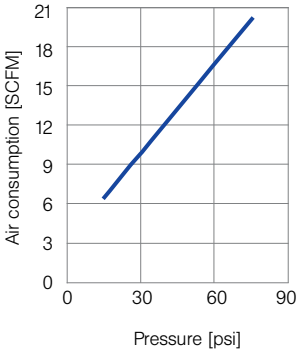


600.130.56.01 with accessories

Technical data







Ordering no.			
Type	Mat. no.		Connection
	S2 Natural PP	**56** POM	1/4" Male NPT
600. 130	○	○	**BC**

Example of ordering:	**Type** **600. 130.**	**+**	**Mat. no.** **56**	**+**	**Conn.** **AC**	**=**	**Ordering no.** **600. 130. 56. AC**

Note: The cover strip allows to customize the jet width by closing individual holes.

Multi-channel flat jet nozzles for air Whisperblast®, plastic versions Series 600.332.56

Extremely silent!

NEW

Series 600.332.56

The multi-channel flat jet nozzles of the 600.332 series generate a continuous powerful air jet. The noise level and air consumption remain low even at higher air pressures. The projecting tips at the nozzle outlet prevent air penetration into human skin. These nozzles comply with the OSHA standards.

* Complies with OSHA requirements on noise level

Cost savings 26 %

Noise reduction 21 %

Material
POM

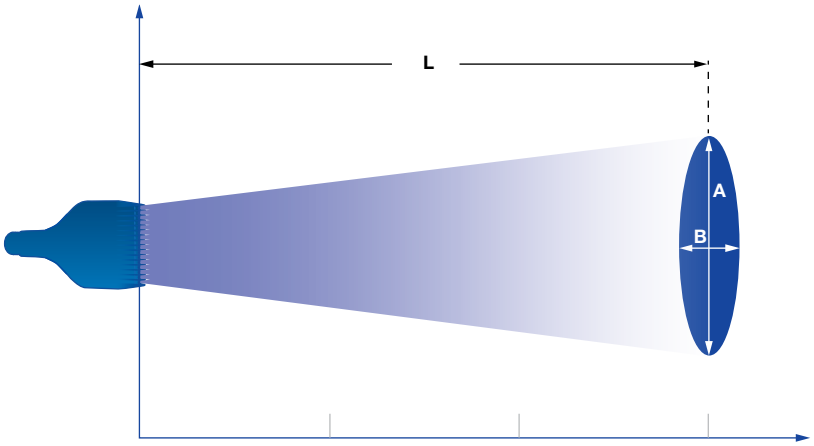
Blowing force
.45 LBF at 29 psi

Noise level
70 db(A) at 29 psi

Air consumption
V_{LN}=10 SCFM at 29 psi

Pressure
P_{max}= 87 psi

Max. temperature
50°C/ 122°F

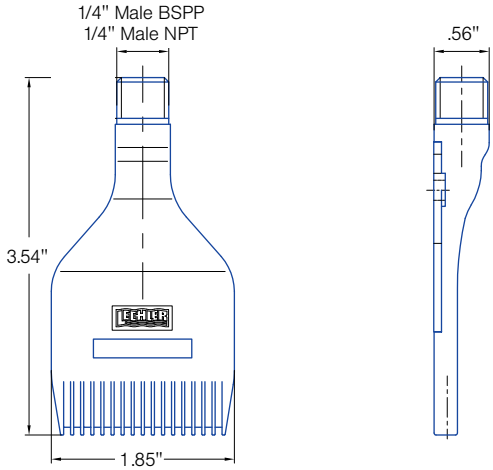


Jet pattern of 600.332 nozzle series

Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	24.6	35	35

Jet dimensions at L

A [in]:	5	8	9
B [in]:	5	8	9



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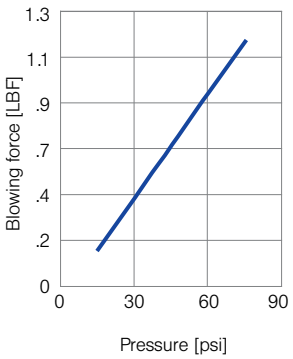
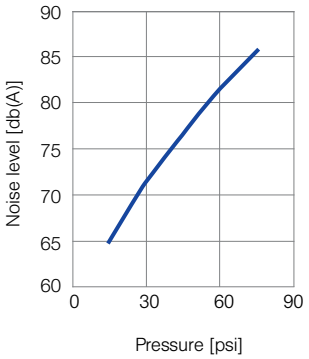
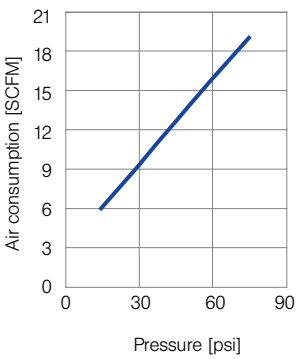






Ordering no.			
Type	Mat. no.	Connection	
	56 POM	1/4" Male BSPP	1/4" Male NPT
600. 332	○	**AC**	**BC**

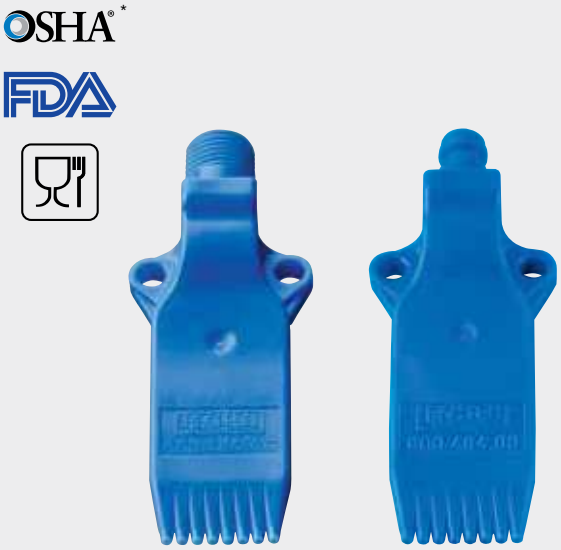
Example no.	**Type**	**+**	**Mat. no.**	**+**	**Conn.e**	**=**	**Ordering**
of ordering:	**600. 332.**	**+**	**56**	**+**	**AC**	**=**	**600. 332. 56. AC**

Multi-channel flat jet nozzles for air Whisperblast®, plastic versions Series 600.484.56

Extremely silent!

Series 600.484.56

The multi-channel flat jet nozzles of the 600.484 series generate a compact, powerful air jet. Due to its narrow design, this nozzle out performs with its low air consumption and low noise level. Since they are made completely of POM, these nozzles are also suitable for applications in the food industry.



* Complies with OSHA requirements on noise level

Cost savings	**22 %**
Noise reduction	**22 %**

Material
POM

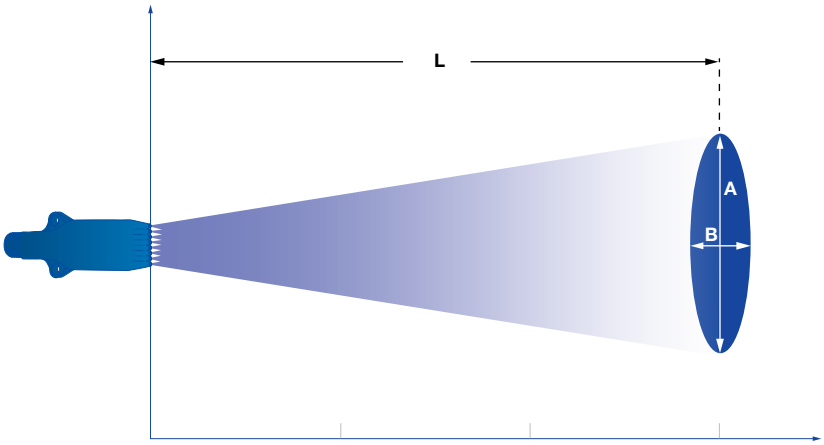
Blowing force
.18 LBF at 29 psi

Noise level
65 db(A) at 29 psi

Air consumption
V_{LN}=4.4 SCFM at 29 psi

Pressure
P_{max} = 87 psi

Max. temperature
50°C/ 122°F

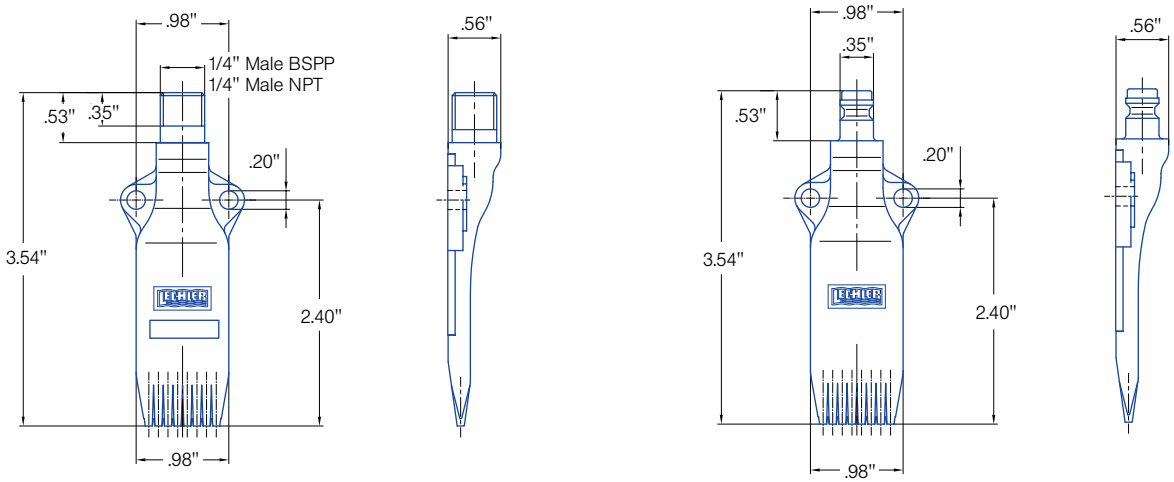


Jet pattern of 600.484 nozzle series

Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	13.8	23.6	33.5

Jet dimensions at L

A [in]:	4.3	6.7	8.7
B [in]:	3.2	4.7	6.7



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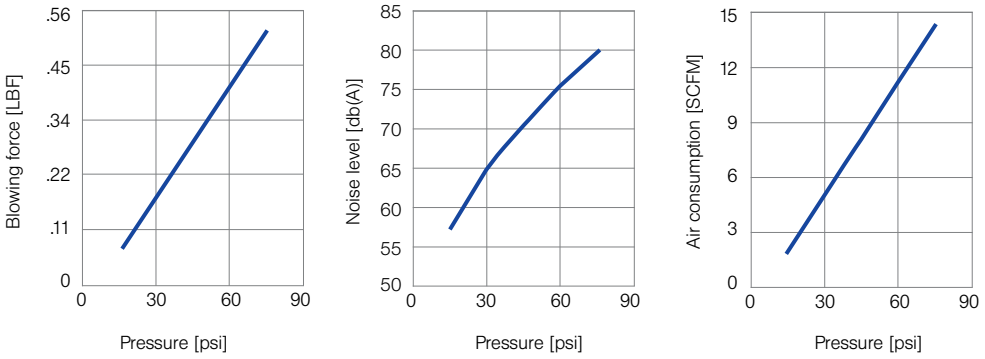


Ordering no.					
Type	Mat. no.	Connection			
	56 POM	1/4" Male BSPP	1/4" Male NPT	M12 x 1.25	Quick connect coupling NW 5
600. 484	○	**AC**	**BC**	**HG**	**00**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 484.	**+**	**56**	**+**	**AC**	**=**	**600. 484. 56. AC**

Multi-channel flat jet nozzles for air Whisperblast®, metalic versions Series 600.130.1Y

Extremely silent!

Series 600.130.1Y

The multi-channel flat jet nozzles of the 600.130 series generate a planar, powerful air jet. The noise level and air consumption remain low even at higher air pressures. In the stainless steel version (AISI 316L), these nozzles can therefore be used in applications with the highest loads.

* Complies with OSHA requirements on noise level

Cost savings 24 %

Noise reduction 22 %

Material
Stainless steel
AISI 316L

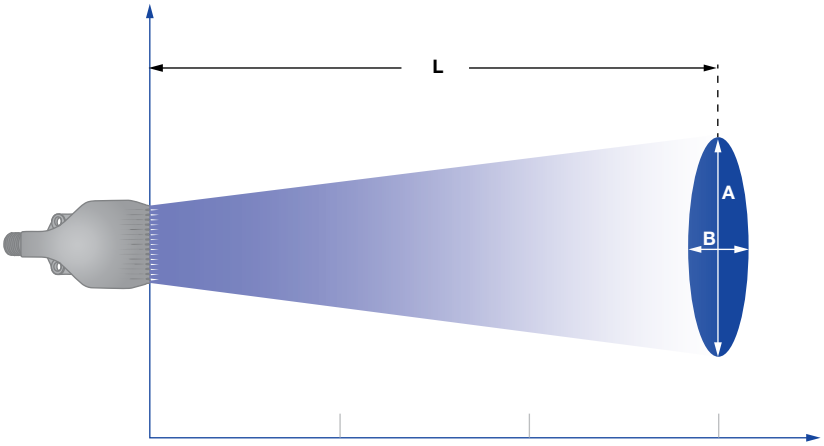
Blowing force
.45 LBF at 29 psi

Noise level
70 db(A) at 29 psi

Air consumption
V_{LN}=8 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
550°C/ 1022°F

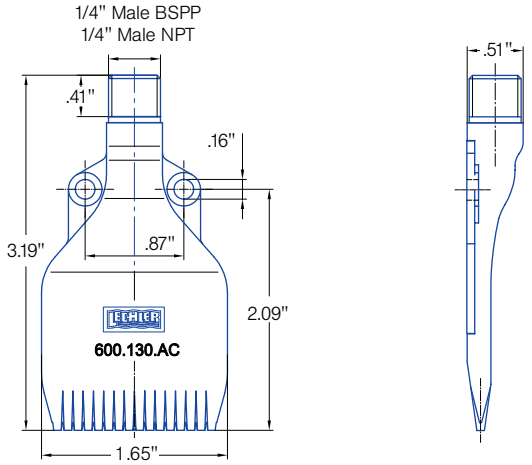


Jet pattern of 600.130 nozzle series

Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	11.8	16.7	23.6

Jet dimensions at L

A [in]:	3.9	5.5	6.7
B [in]:	2.1	3.1	4.3



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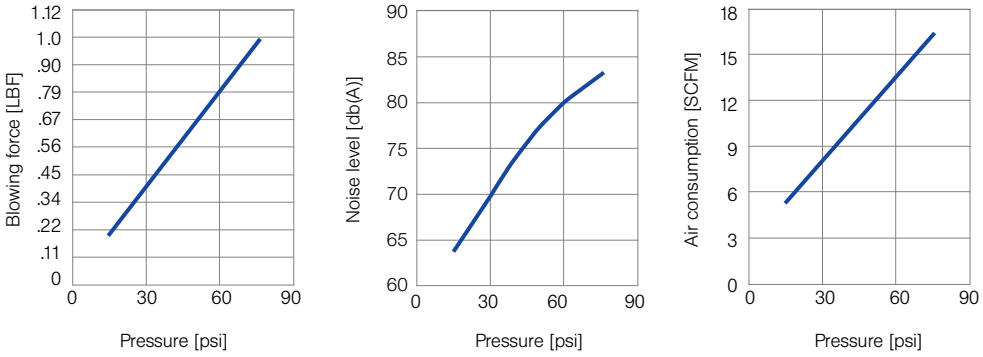


Ordering no.			
Type	Mat. no.	Connection	
	1Y Stainless steel AISI 316L	1/4" Male BSPP	1/4" Male NPT
600. 130	○	**AC**	**BC**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 130.	**+**	**1Y**	**+**	**AC**	**=**	**600. 130. 1Y. AC**

Multi-channel flat jet nozzles for air Whisperblast®, metalic versions Series 600.283.42

Series 600.283.42

The multi-channel flat jet nozzles of the 600.283 series are made of aluminum and are capable of withstanding significantly higher thermal and mechanical loads than comparable air nozzles made of plastic. In addition, the blowing force also increases at higher air pressures, making this series suitable for very demanding applications.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings 19 %

Noise reduction 18 %

Material
Aluminum

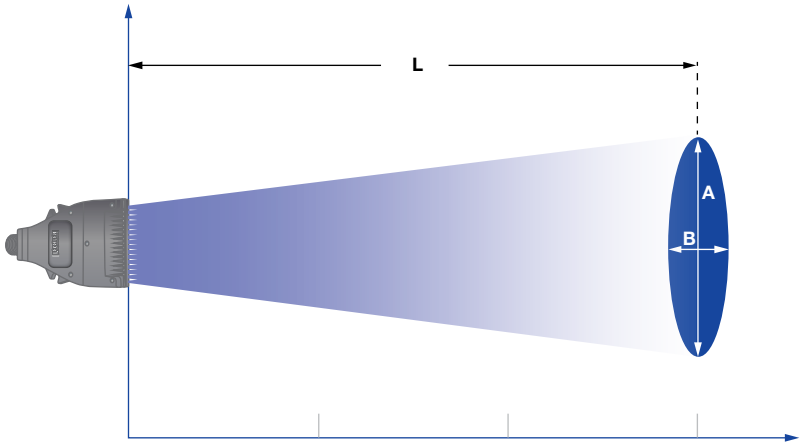
Blowing force
.54 LBF at 29 psi

Noise level
76 db(A) at 29 psi

Air consumption
V_{LN}=10.6 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
200°C/ 392°F

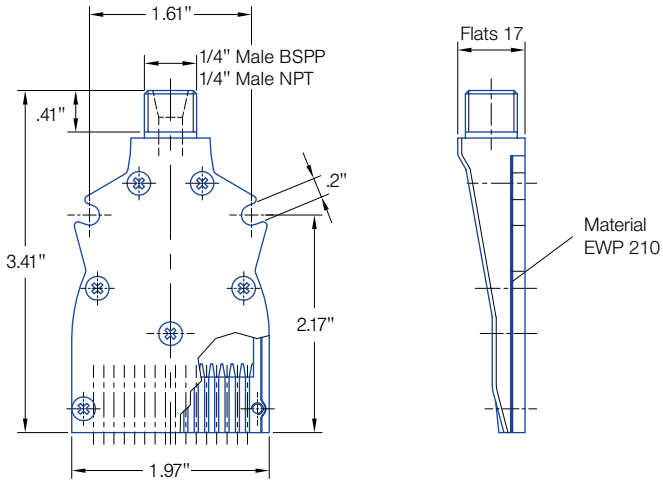


Jet pattern of 600.283 nozzle series

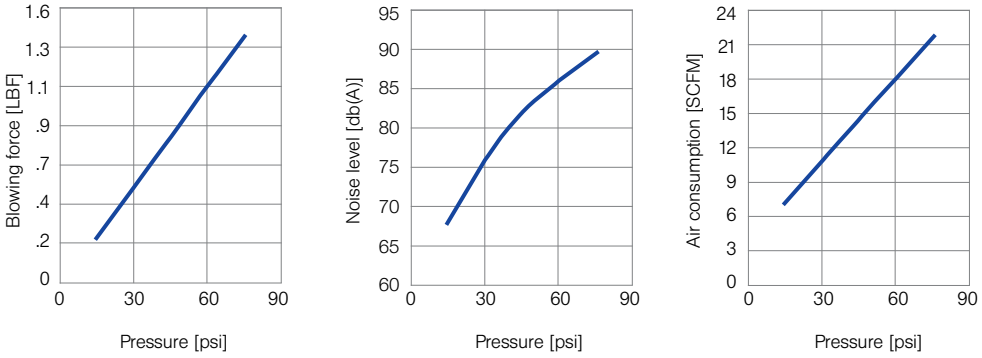
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	29.5	35	35

Jet dimensions at L

A [in]:	6.7	8.3	9.5
B [in]:	5.9	7.1	8.3



Technical data



Ordering no.			
Type	Mat. no.	Connection	
	42 Aluminum	1/4" Male BSPP	1/4" Male NPT
600. 283	○	**AC**	**BC**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**= Ordering no.**
	600. 283.	**+**	**42**	**+**	**AC**	**= 600. 283. 42. AC**

Multi-channel flat jet nozzles for air Whisperblast®, metalic versions Series 600.606.42

NEW

Series 600.606.42

The multi-channel flat jet nozzles of the 600.606 series are made of aluminum and are capable of withstanding significantly higher thermal and mechanical loads than comparable air nozzles made of plastic. In addition, the blowing force also increases at higher air pressures, making this series suitable for demanding applications.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings	**21 %**	**Noise reduction**	**18 %**

Material
Aluminum

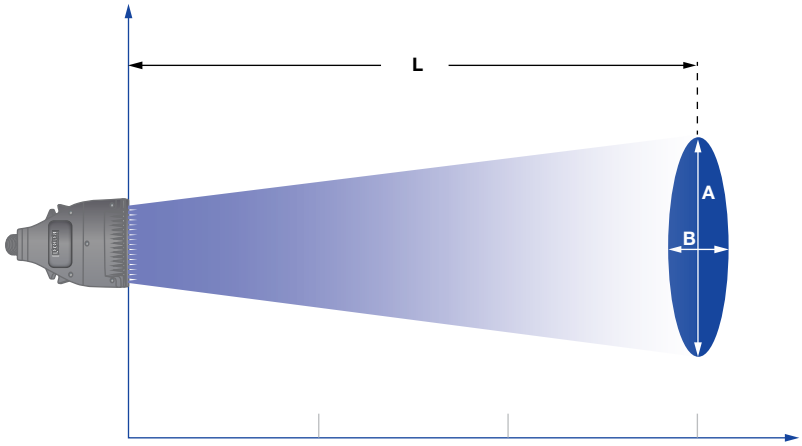
Blowing force
.32 LBF at 29 psi

Noise level
68.5 db(A) at 29 psi

Air consumption
V_{LN}=7 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
200°C/ 392°F

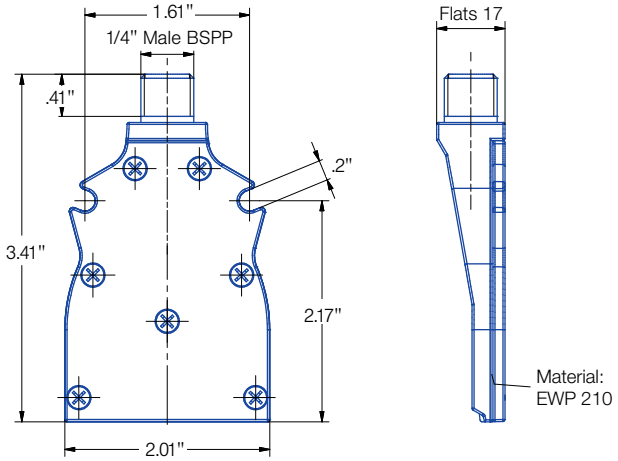


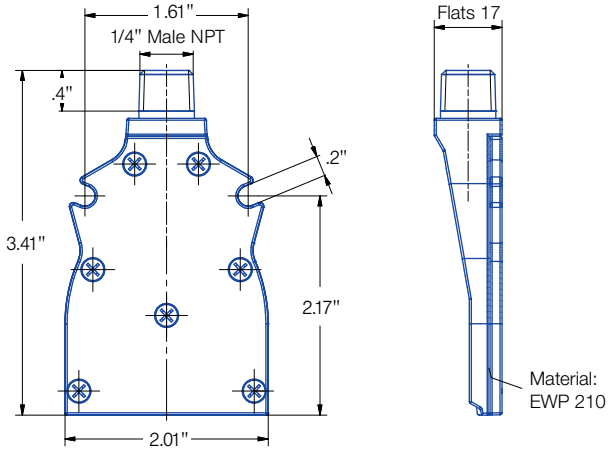
Jet pattern of 600.606 nozzle series

Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	24.6	35.4	36.4

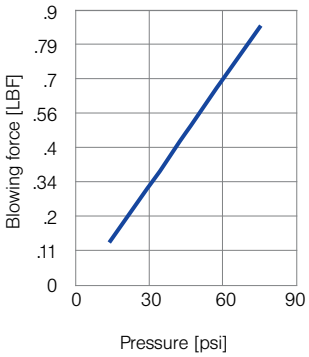
Jet dimensions at L

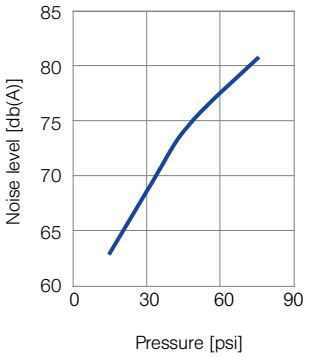
A [in]:	5.7	8.3	8.3
B [in]:	5	7.3	8.9

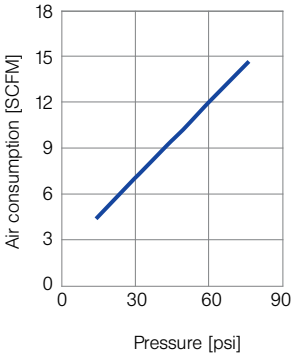




Technical data







Ordering no.			
Type	Mat. no.	Connection	
	42 Aluminum	1/4" Male BSPP	1/4" Male NPT
600. 606	○	**AC**	**BC**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 606.	**+**	**42**	**+**	**AC**	**=**	**600. 606. 42. AC**

Multi-channel flat jet nozzles for air Whisperblast®, metalic versions Series 600.493.1Y

Extremely silent!

Series 600.493.1Y

The multi-channel flat jet nozzles of the 600.493 series generate an extremely wide, powerful air jet. Since this nozzle is made completely of stainless steel (AISI 316L), it meets even the highest thermal requirements. The projecting tips at the nozzle outlet prevent air penetration into human skin. These nozzles comply with the OSHA standards.

* Complies with OSHA requirements on noise level

Cost savings	34 %	**Noise reduction**	21 %

Material
Stainless steel
AISI 316L

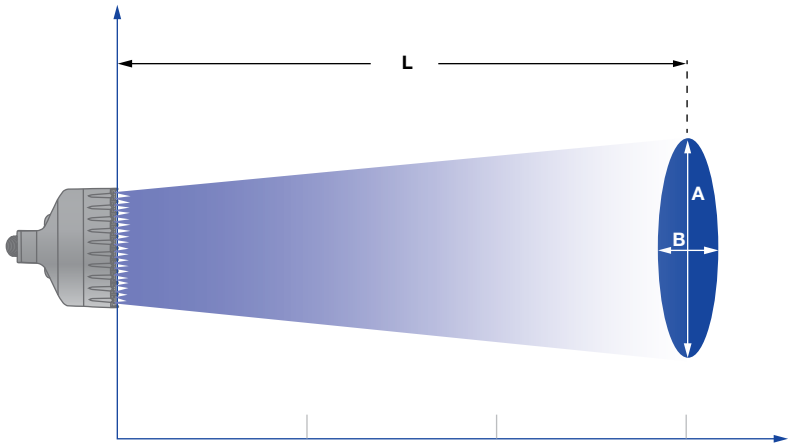
Blowing force
.94 LBF at 29 psi

Noise level
78 db(A) at 29 psi

Air consumption
V_{LN}=17.7 SCFM at 29 psi

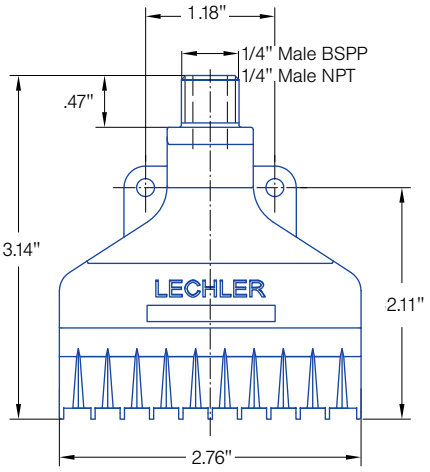
Pressure
P_{max} = 435 psi

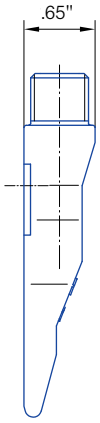
Max. temperature
550°C/ 1022°F



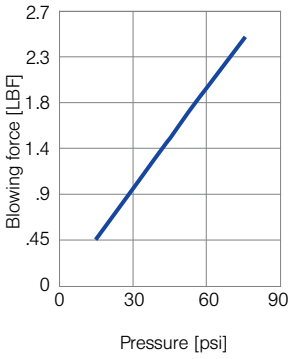
Jet pattern of 600.493 nozzle series

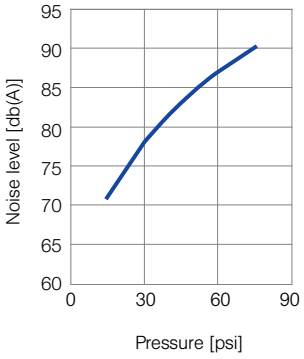
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	35	35	35
Jet dimensions at L			
A [in]:	8.3	9.5	10.6
B [in]:	8.3	8.3	11.0

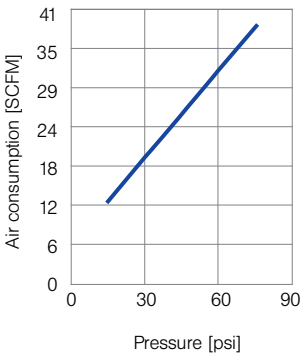




Technical data







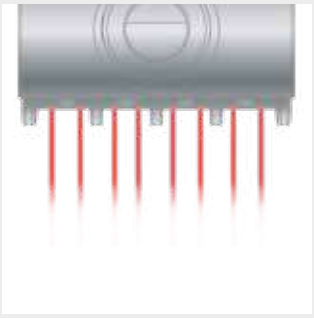
Ordering no.			
Type	Mat. no.	Connection	
	1Y		
	Stainless steel AISI 316L	1/4" Male BSPP	1/4" Male NPT
600. 493	○	**AC**	**BC**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 493.	**+**	**1Y**	**+**	**AC**	**=**	**600. 493. 1Y. AC**

Multi-channel flat jet nozzles for air Whisperblast®, metalic versions Series 600.562.1Y

Series 600.562.1Y

The multi-channel flat jet nozzles of the 600.562 series are ideal for applications with restricted space. In addition, the nozzle material (AISI 316L) makes them resistant to increased pressures and temperatures.
The projecting tips at the nozzle outlet prevent air penetration into human skin. These nozzles comply with the OSHA standards.



* Complies with OSHA requirements on noise level

Cost savings	**8 %**	**Noise reduction**	**14 %**

Material
Stainless steel
AISI 316L

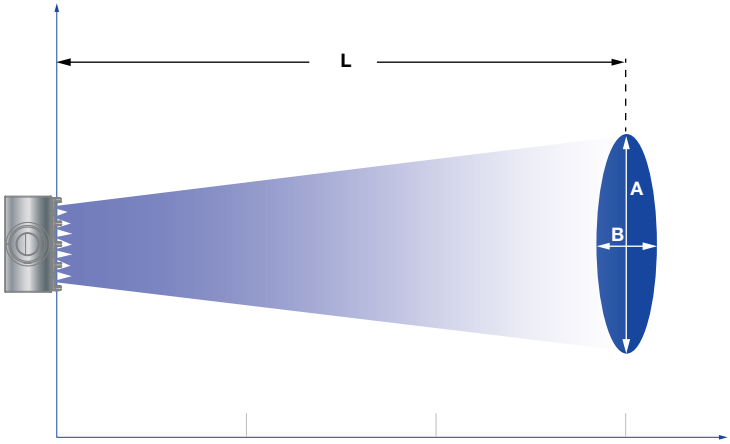
Blowing force
.3 LBF at 29 psi

Noise level
71 db(A) at 29 psi

Air consumption
V_{LN}=5 SCFM at 29 psi

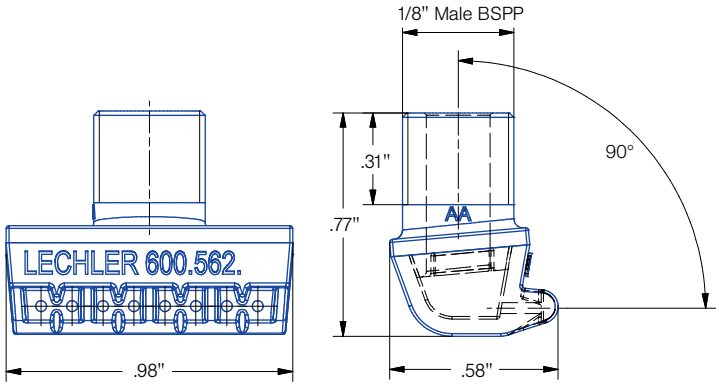
Pressure
P_{max} = 435 psi

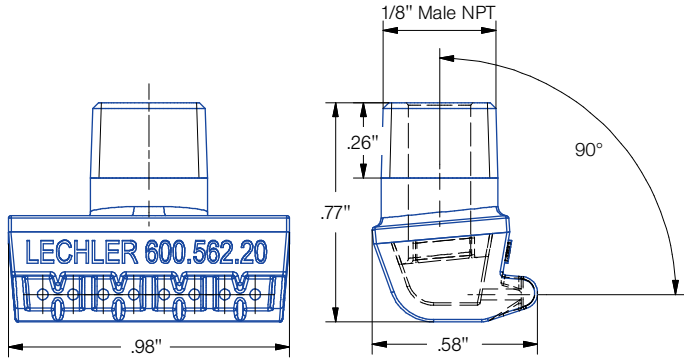
Max. temperature
550°C/ 1022°F



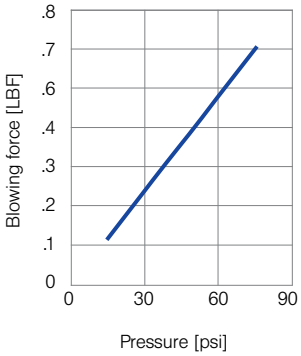
Jet pattern of 600.562 nozzle series

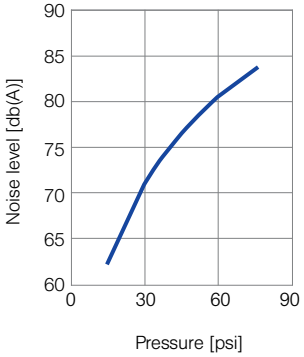
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	20	33.4	35
Jet dimensions at L			
A [in]:	4.5	7.9	9.1
B [in]:	3.9	6.1	7.5

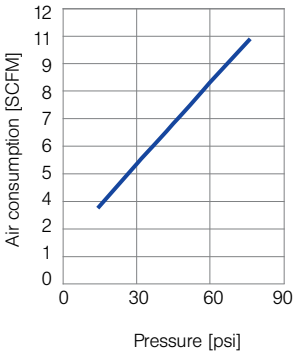




Technical data







Ordering no.			
Type	Mat. no.	Conection	
	1Y Stainless steel AISI 316L	1/8" Male BSPP	1/8" Male NPT
600. 562*	○	**10**	**–**
600. 562	○	**–**	**20**

*Also available with inclination angle 100°

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 562.	**+**	**1Y**	**+**	**10**	**=**	**600. 562. 1Y. 10**

Mini multi-channel flat jet nozzles for air
Series 600.382.35

Series 600.382.35

The mini multi-channel flat jet nozzles of the 600.382 series generate a narrow, powerful air jet. Very accurate and economical operation is possible thanks to the narrow orifice.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings 15 %

Noise reduction 12 %

Materials
Brass nickel plated, PVC

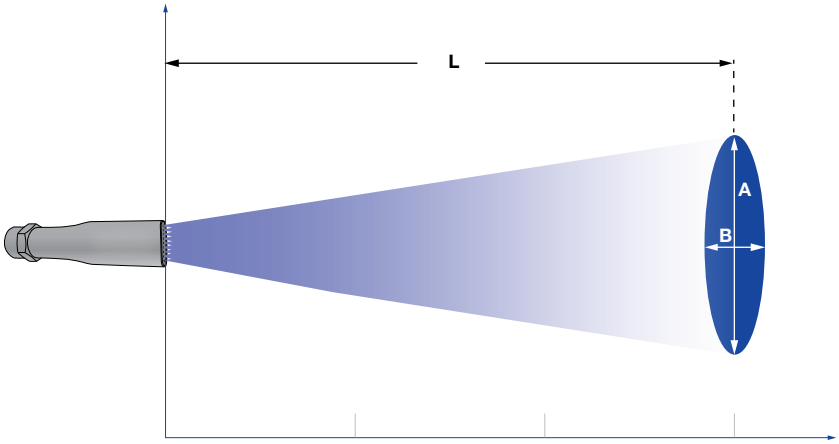
Blowing force
5 LBF at 29 psi

Noise level
77.5 db(A) at 29 psi

Air consumption
V_{LN}=9 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
50°C/ 122°F

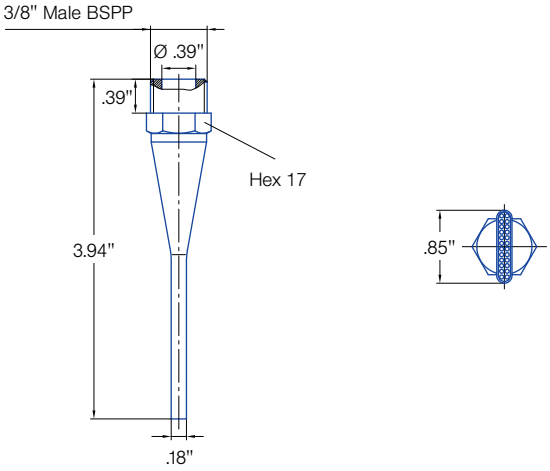


Jet pattern of 600.382.35 nozzle series

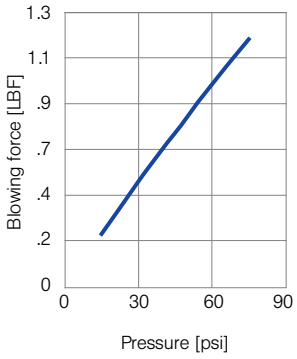
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	18.7	32.5	35

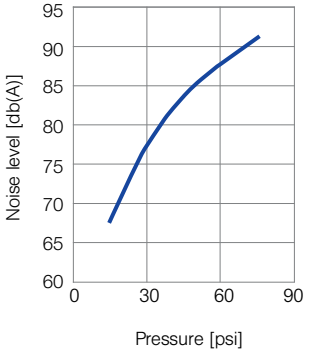
Jet dimensions at L

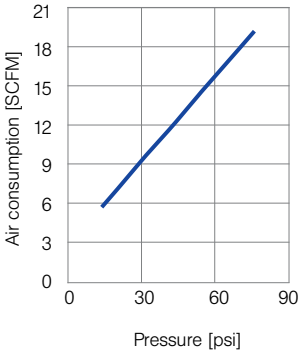
A [in]:	4.3	6.7	7.9
B [in]:	3.4	5.5	7.1



Technical data







Ordering no.		
Type	Mat. no. **35** Brass nickel plated/ PVC	Connection 3/8" Male BSPP
600. 382	○	**AE**

Example of ordering:	**Type** **600. 382.**	**+**	**Mat. no.** **35**	**+**	**Conn.** **AE**	**= Ordering no.** **600. 382. 35. AE**

Intensive multi-channel flat jet nozzles for air
Series 600.383.35

Series 600.383.35

The intensive multi-channel flat jet nozzles of the 600.383 series generate a concentrated, powerful air jet. Due to the flattened design, the jet depth of this nozzle always remains constant even at changing pressures. This permits precise operation even under changing conditions.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings 8 %

Noise reduction 10 %

Materials
Brass nickel plated, PVC

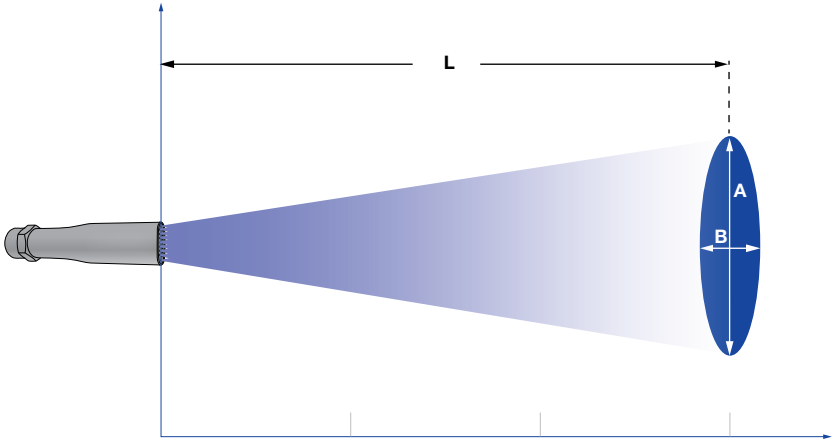
Blowing force
1 LBF at 29 psi

Noise level
86 db(A) at 29 psi

Air consumption
V_{LN}=18 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
50°C/ 122°F

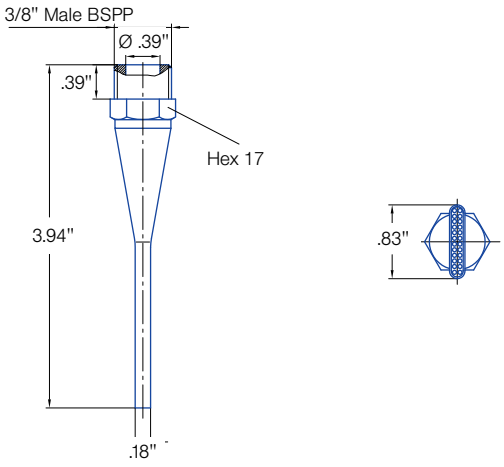


Jet pattern of 600.383.35 nozzle series

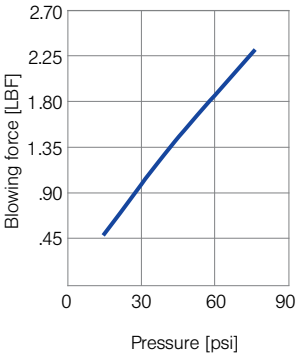
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	35	35	35

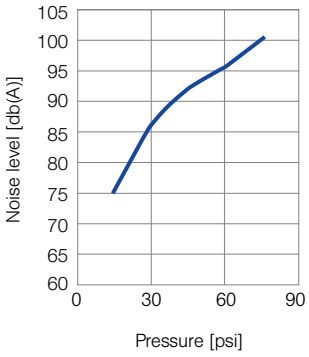
Jet dimensions at L

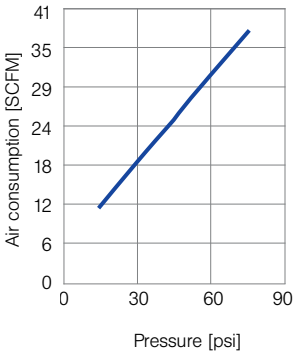
A [in]:	7.9	16.7	20
B [in]:	9.1	9.1	9.1



Technical data







Ordering no.		
Type	Mat. no.	Connection
	35 Brass nickel plated / PVC	3/8" Male BSPP
600. 383	○	**AE**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 383.	**+**	**35**	**+**	**AE**	**=**	**600. 383. 35. AE**

Compact multi-channel flat jet nozzles for air
Series 600.386.01

Series 600.386.01

The compact multi-channel flat jet nozzles of the 600.386 series generate a concentrated, powerful air jet. The compact design of this series makes the nozzles particularly suitable for use in locations that are difficult to access. This permits precise operation in very small spaces.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings 8 %

Noise reduction 15 %

Materials
Steel, PVC

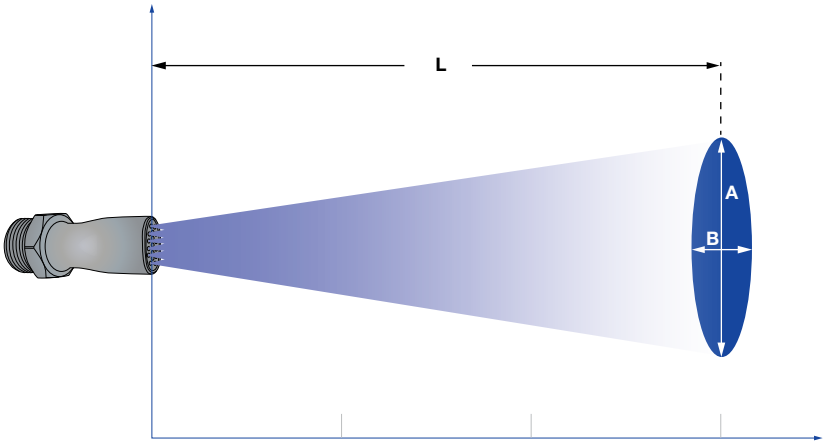
Blowing force
.8 LBF at 29 psi

Noise level
83.5 db(A) at 29 psi

Air consumption
V_{LN}=16 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
50°C/ 122°F

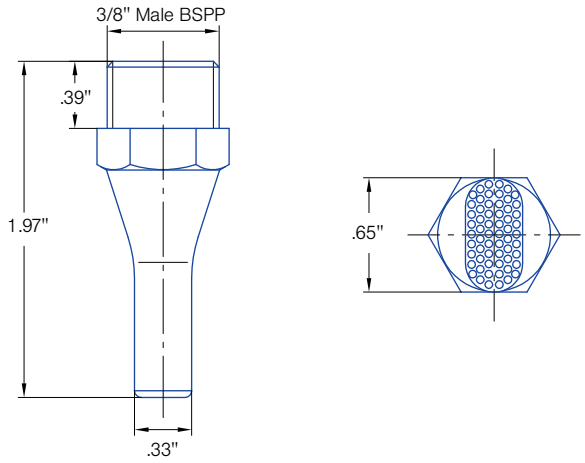


Jet pattern of 600.386.01 nozzle series

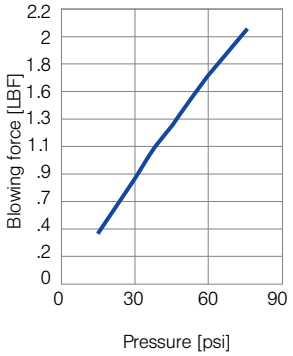
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	32.5	35	35

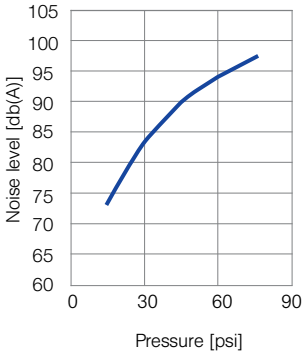
Jet dimensions at L

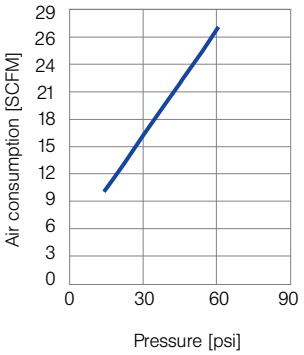
A [in]:	6.3	11.8	18.1
B [in]:	8.5	8.5	8.5



Technical data







Ordering no.		
Type	Mat. no.	Connection
	01	
	Steel/ PVC	3/8" Male BSPP
600. 386	○	**AE**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 386.	**+**	**01**	**+**	**AE**	**=**	**600. 386. 01. AE**

Maxi multi-channel flat jet nozzles for air
Series 600.385.35

Series 600.385.35

The maxi multi-channel flat jet nozzles of the 600.385 series generate a continuous very powerful air jet. Due to the large nozzle cross-section, this nozzle focuses large quantities of air into a concentrated jet that has a powerful impact even over large distances. Despite this, the noise level still remains low.

OSHA*

* Complies with OSHA requirements on noise level

Cost savings 28 %

Noise reduction 15 %

Materials
Brass nickel plated, PVC

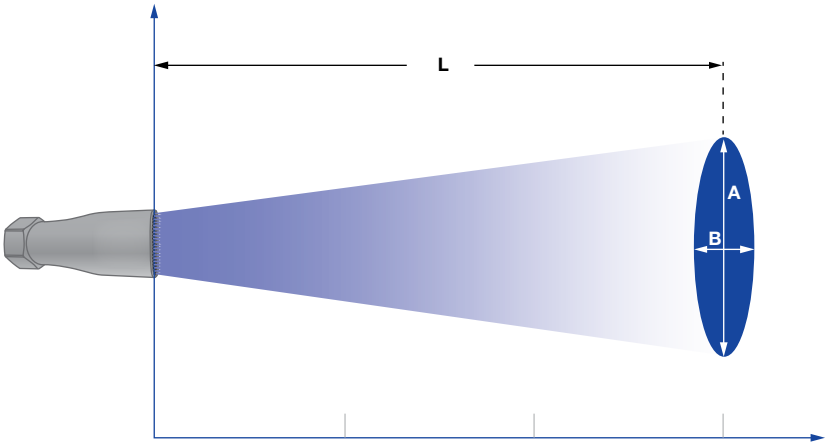
Blowing force
2.6 LBF at 29 psi

Noise level
91.5 db(A) at 29 psi

Air consumption
V_{LN}=59 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
50°C/ 122°F

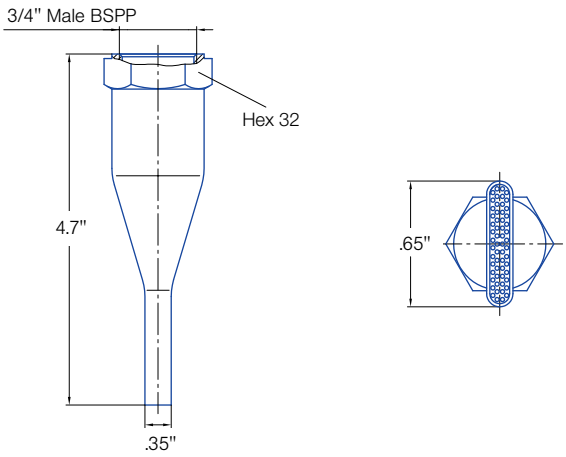


Jet pattern of 600.385.35 nozzle series

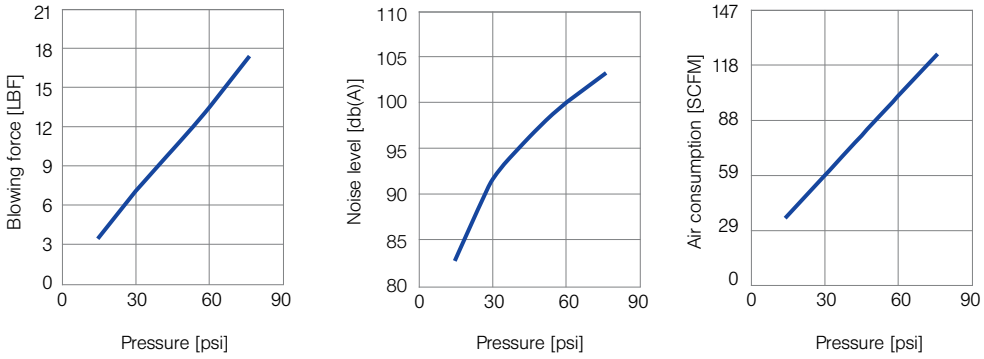
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	30.5	30.5	30.5

Jet dimensions at L

A [in]:	8.1	10	10.6
B [in]:	7.9	9.7	10.6



Technical data



Ordering no.		
Type	Mat. no.	Connection
	35 Brass nickel plated/PVC	3/4" Male BSPP
600. 385	○	**AL**

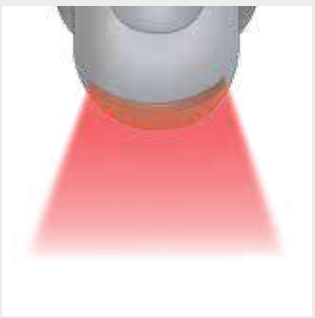
Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 385.	**+**	**35**	**+**	**AL**	**=**	**600. 385. 35. AL**

Flat jet slotted nozzle tips for air or saturated steam Series 679

Series 679

The flat jet nozzle tips of the 679 series are characterized by their wide, powerful air jet. Due to the special nozzle design, the jet angle is approx. 70° – 90°. Mounting with a retaining nut allows for an easy installation and alignment of the nozzles.

OSHA* FDA** **



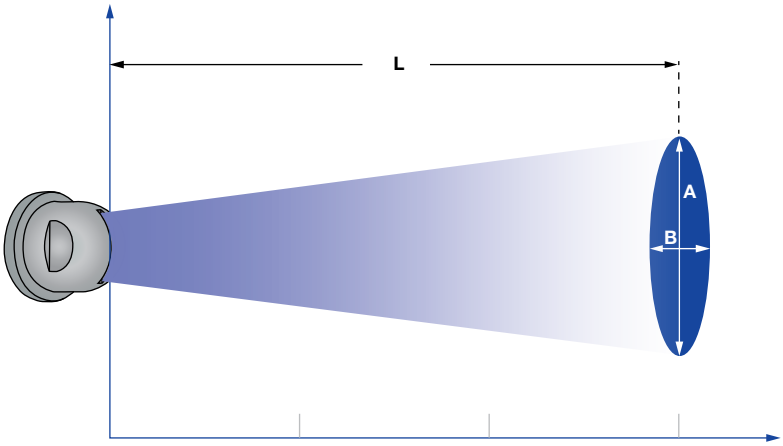
* Complies with OSHA requirements on noise level
** Only applies to stainless steel version

Materials
Stainless steel
AISI 316Ti,
Brass

Noise level
67-92 db(A) at 29 psi

Air consumption
see table

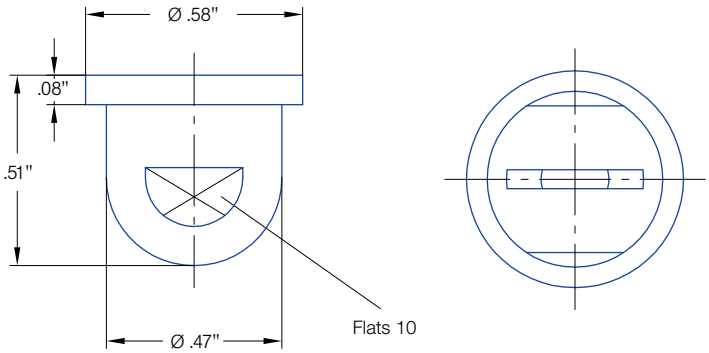
Pressure
P_{max}=145 psi



Jet pattern of 679 nozzle series

Pressure:		14.5 psi	44 psi	72.5 psi
679.037	Distance L [in]:	1.9	3.9	5.9
	A [in]:	4.3	10.2	15
	B [in]:	1	1.4	1.8
679.117	Distance L [in]:	1.9	4.9	5.9
	A [in]:	3.9	9.8	12.2
	B [in]:	1	1.2	1.4
679.255	Distance L [in]:	14.8	20	20
	A [in]:	3.5	7.5	11
	B [in]:	3.5	3.5	3.5

Pressure:		14.5 psi	44 psi	72.5 psi
679.415	Distance L [in]:	27	35	35
	A [in]:	6.3	11.8	18.1
	B [in]:	8.5	8.5	8.5
679.495	Distance L [in]:	35	35	35
	A [in]:	7.9	16.1	20.1
	B [in]:	9.1	9.1	9.1



Spray angle	Ordering no.			Equiv. Orifice diameter [in]	Capacity for Air [Standard Cubic Feet per Minute]				Capacity for Saturated Steam [lb/hr]			
	Type	Mat. no. 17 AISI 316Ti	Mat. no. 30 Brass		7 psi	29 psi	73 psi	145 psi	7 psi	29 psi	73 psi	145 psi
approx. 70° – 90°	**679. 037**	-	○	.047	.9	1.8	3.5	6.5	2.6	5.1	10.1	18.3
	679. 085	○	○	.051	1.2	2.4	4.7	8.7	3.5	6.8	13.4	24.4
	679. 117	○	○	.059	1.2	2.5	4.9	9.1	3.8	7.3	14.3	25.8
	679. 165	○	○	.071	1.5	3.0	6.1	11.1	4.4	9.0	17.6	31.5
	679. 255	○	○	.083	2.1	4.3	8.5	15.7	6.2	12.6	24.7	44.5
	679. 365	○	○	.110	3.7	7.5	15.0	27.4	11.0	22.0	43.1	77.7
	679. 415	○	○	.142	6.0	12.0	24.0	43.9	17.6	35.1	69.1	124.8
	679. 495	○	○	.169	9.2	18.3	36.6	67.1	27.3	54.6	106.8	192.6

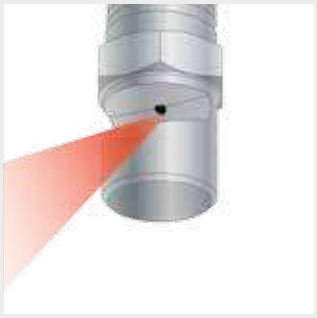
Example of ordering:	**Type** **679. 037.**	**+**	**Mat. no.** **30**	**=**	**Ordering no.** **679. 037. 30. 00**

Flat jet tongue-type nozzles for air or saturated steam Series 686

Series 686

The flat jet tongue-type nozzles of the 686 series are suitable for short blowing distances. The compact design allows for large jet widths even for small spaces. The versions in brass and stainless steel AISI 303 can also be used with high ambient temperatures.

OSHA* FDA** **



* Complies with OSHA requirements on noise level
** Only applies to stainless steel version

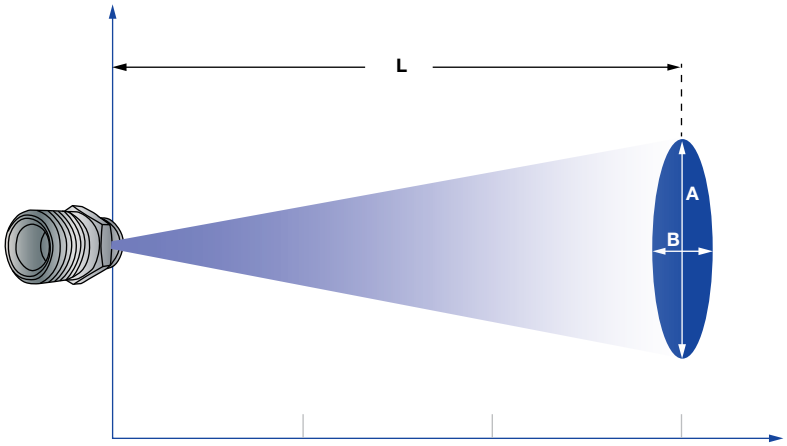
Materials
Stainless steel
AISI 303, Brass

Noise level
73-84 db(A) at 29 psi

Air consumption
see table

Pressure
P_{max} = 435 psi

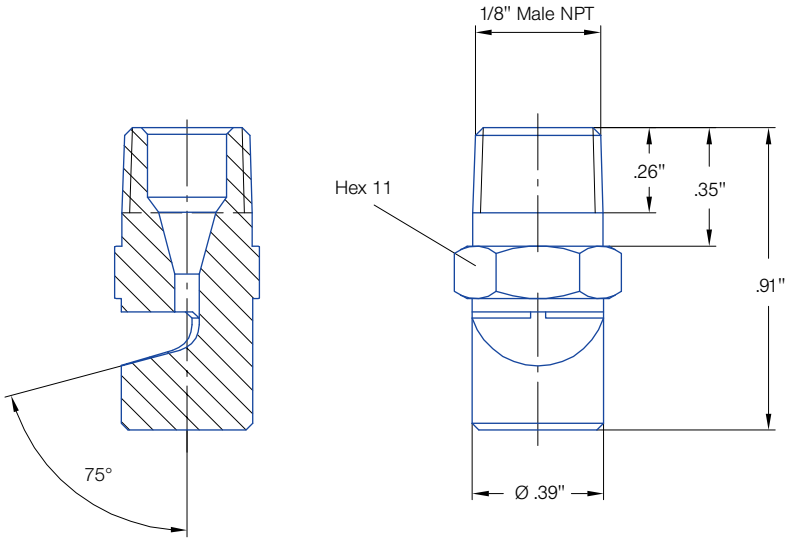
Max. temperature
550°C/ 1022°F (Stainless steel)
240°C/ 464°F (Brass)



Jet pattern of 686 nozzle series

Pressure:		14.5 psi	44 psi	72.5 psi
686.408	Distance L [in]:	1.6	3.2	4.9
	A [in]:	1.4	2	2.4
	B [in]:	.6	1.6	2
686.528	Distance L [in]:	2.4	4.0	5.9
	A [in]:	3	5.5	8.3
	B [in]:	.8	1.6	2
686.608	Distance L [in]:	3.5	6.9	9.8
	A [in]:	5.7	9.1	13.8
	B [in]:	1	1.8	2.2

Pressure:		14.5 psi	44 psi	72.5 psi
686.688	Distance L [in]:	6	15.8	20.7
	A [in]:	9.1	22.1	29.1
	B [in]:	1.6	3.2	3.9
686.728	Distance L [in]:	7.1	9.1	14.8
	A [in]:	6.7	14.2	20.1
	B [in]:	2	2	2.8



Spray angle	Ordering no.				Equiv. Orifice diameter [in]	Capacity for Air [Standard Cubic Feet per Minute]						Capacity for Saturated Steam [lb/hr]					
	Type	Mat. no. 17 AISI 316Ti	Mat. no. 30 Brass	Conn. 1/8" Male NPT		10 psi	20 psi	40 psi	60 psi	80 psi	100 psi	10 psi	20 psi	40 psi	60 psi	80 psi	100 psi
approx. 70°	**686. 408**	○	○	**BA**	.039	.4	.5	.8	1.1	1.4	1.7	1.8	2.4	3.5	4.6	5.7	6.6
	686. 488	○	○	**BA**	.051	.6.2	.9	1.4	1.9	2.4	2.9	2.6	3.7	5.7	7.5	9.3	11
	686. 528	○	○	**BA**	.059	.9	1.1	1.9	2.5	3.2	3.8	3.5	5.1	7.5	10	12	14
	686. 568	○	○	**BA**	.067	1.0	1.5	2.4	3.4	4.2	5.0	4.6	6.6	10	13	16	19
	686. 608	○	○	**BA**	.075	1.3	1.8	3.0	4.2	5.3	6.2	5.7	8.2	13	17	20	24
	686. 688	○	○	**BA**	.094	2.2	2.9	4.7	6.6	8.3	9.9	9.0	13	20	26	32	37
	686. 728	○	○	**BA**	.106	4.0	5.0	7.9	11	14	17	9.9	16	24	32	39	47
	686. 808	○	○	**BA**	.134	6.1	8.0	13	18	23	27	16	25	39	50	62	74

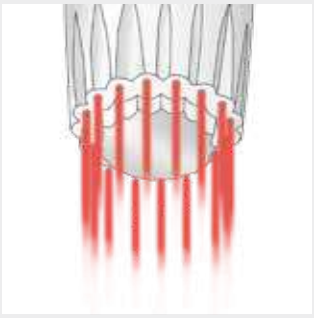
Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	686. 408	**+**	**16**	**+**	**BA**	**=**	**686. 408. 16. CA**

Multi-channel round jet nozzles for air
Series 600.326.5K

Series 600.326.5K

The multi-channel round jet nozzles of the 600.326 series generate a powerful, circular air jet. The noise level and air consumption remain low even at higher air pressures. The special geometry at the nozzle outlet prevents air penetration into human skin. These nozzles comply with the OSHA standards.

OSHA *



* Complies with OSHA requirements on noise level

Cost savings 9 %

Noise reduction 17 %

Material
ABS

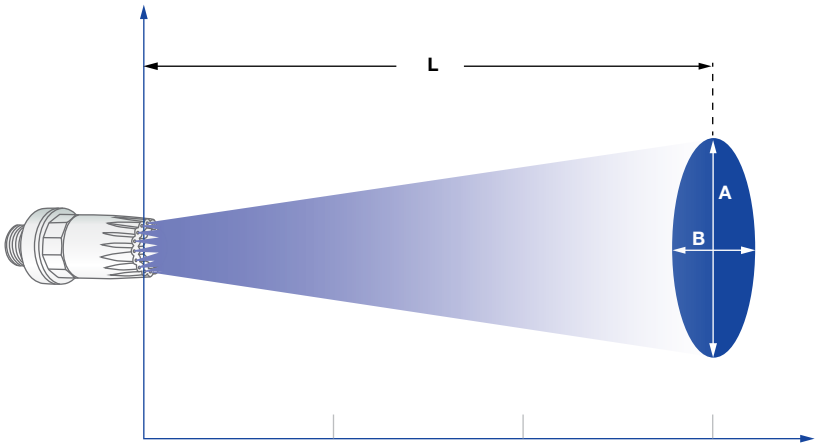
Blowing force
.5 LBF at 29 psi

Noise level
74 db(A) at 29 psi

Air consumption
V_{LN}=8 SCFM at 29 psi

Pressure
P_{max}= 87 psi

Max. temperature
50°C/ 122°F

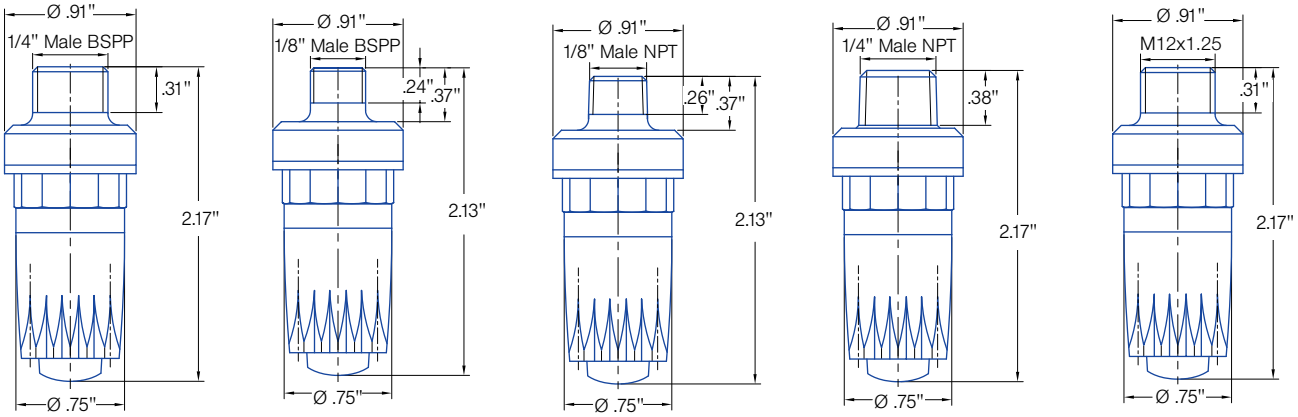


Jet pattern of 600.326.5K nozzle series

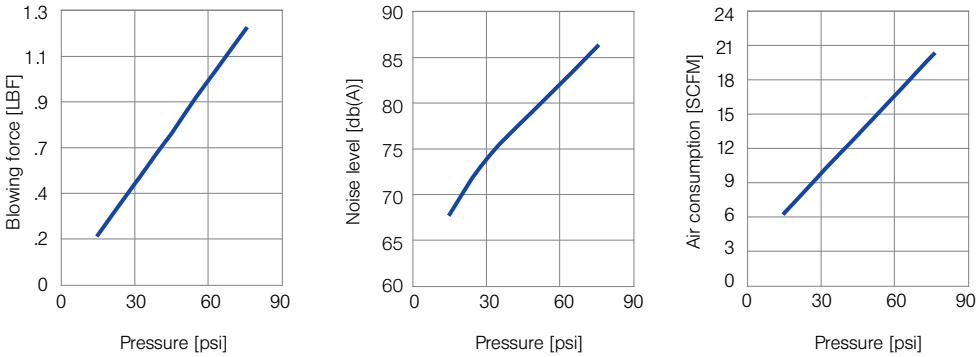
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	28	35	35

Jet image dimensions at L

A [in]:	6.3	8.7	10.2
B [in]:	6.3	8.7	10.2



Technical data



Ordering no.		Connection thread
Type	Conn.	
600. 326. 5K (Material: ABS)	**AC**	1/4" Male BSPP
	AA	1/8" Male BSPP
	BA	1/8" Male NPT
	BC	1/4" Male NPT
	HG	M12 x 1.25

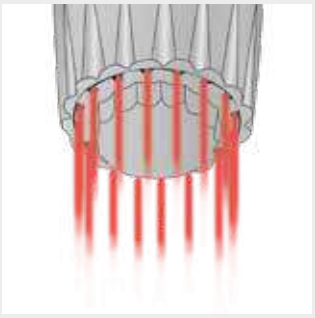
Example of ordering:	**Type 600. 326. 5K**	**+**	**Conn. BC**	**=**	**Ordering no. 600. 326. 5K. BC**

Multi-channel round jet nozzles for air
Series 600.326.3W

Series 600.326.3W

The multi-channel round jet nozzles of the 600.326 series generate a powerful, circular air jet. The noise level and air consumption remain low even at higher air pressures. The zinc version permits use at increased pressure and temperature. The special geometry at the nozzle outlet prevents air penetration into human skin. These nozzles comply with the OSHA standards.

OSHA*



* Complies with OSHA requirements on noise level

Cost savings 8 %

Noise reduction 17 %

Material
Zinc

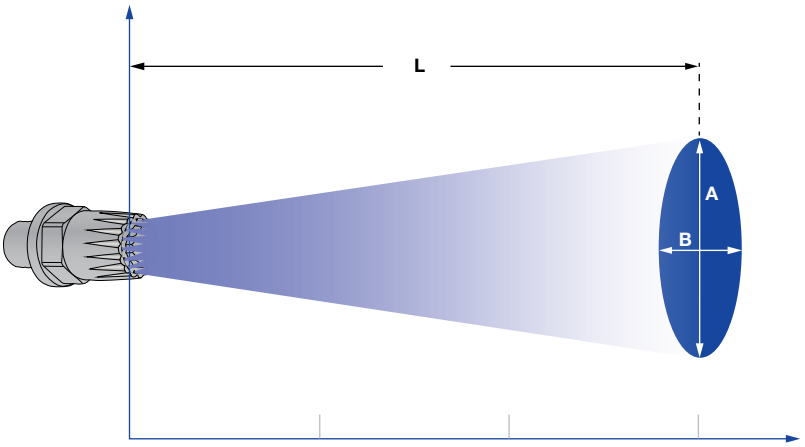
Blowing force
.5 LBF at 29 psi

Noise level
79 db(A) at 29 psi

Air consumption
V_{LN}=9 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
90°C/ 194°F

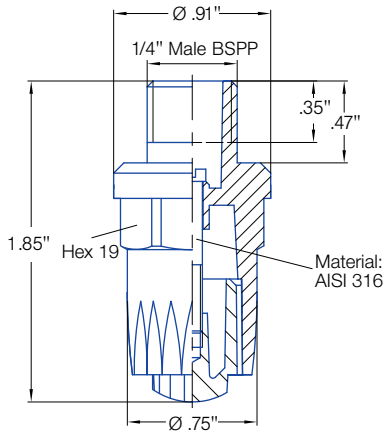


Jet pattern of 600.326.3W nozzle series

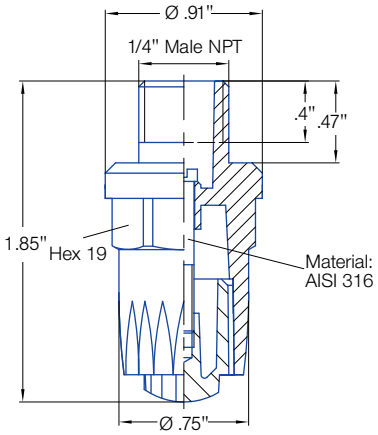
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	28	35	35

Jet image dimensions at L

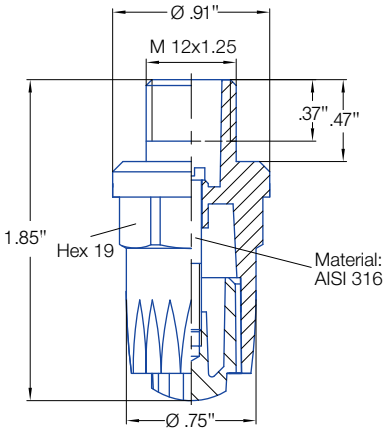
A [in]:	6.3	8.7	10.2
B [in]:	6.3	8.7	10.2



Code AC

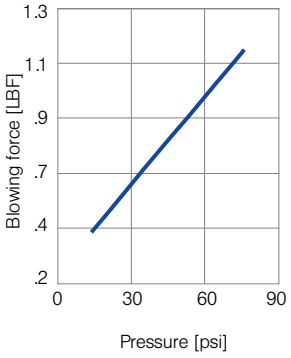


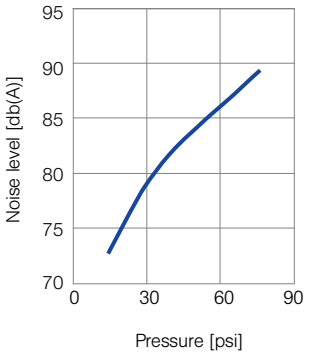
Code BC

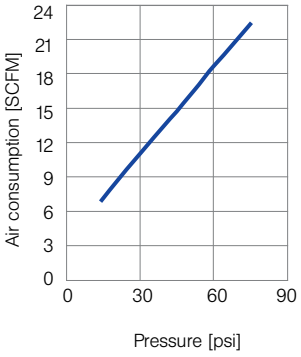


Code HG

Technical data







Ordering no.		Connection thread
Type	Conn.	
600. 326. 3W (Material: Zinc GD-Z410)	**AC**	1/4" Male BSPP
	BC	1/4" Male NPT
	HG	M 12x1.25

Example of ordering:	**Type**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 326. 3W	**+**	**AC**	**=**	**600. 326. 3W. AC**

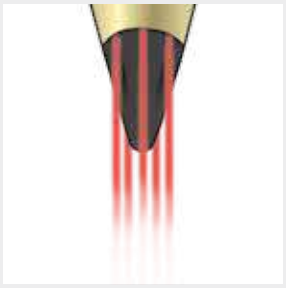
Also as a high-temperature version of brass available on request.

Mini multi-channel round jet nozzles for air
Series 600.388.30

Series 600.388.30

The mini multi-channel round jet nozzles of the 600.388 series generate a point of concentrated air even at large distances. The compact design of this series makes the nozzles particularly suitable for use in locations that are difficult to reach. The special design at the nozzle outlet prevents air penetration into human skin. These nozzles comply with the OSHA standards.

OSHA*



* Complies with OSHA requirements on noise level

Cost savings	**7 %**	**Noise reduction**	**8 %**

Materials
Brass, POM

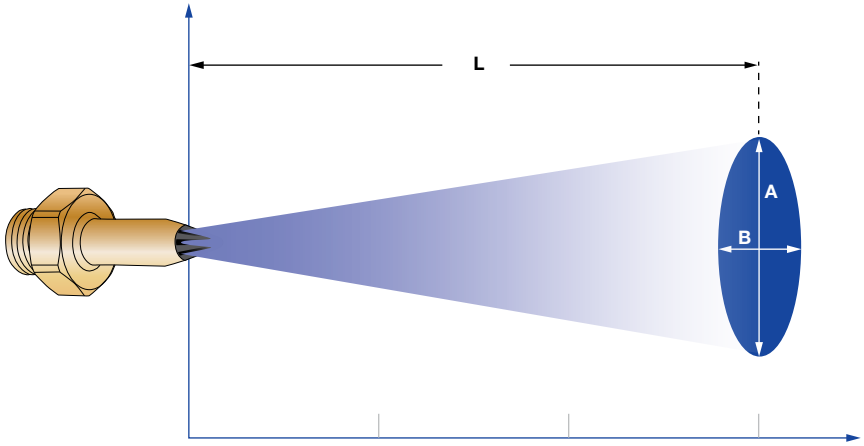
Blowing force
.2 LBF at 29 psi

Noise level
77 db(A) at 29 psi

Air consumption
V_{LN}=5 SCFM at 29 psi

Pressure
P_{max}=145 psi

Max. temperature
50°C/ 122°F

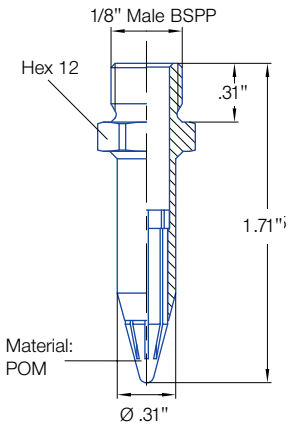


Jet pattern of 600.388 nozzle series

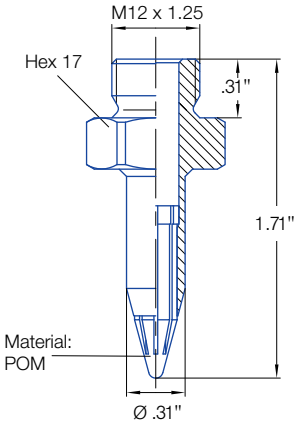
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	20	28	35

Jet image dimensions at L

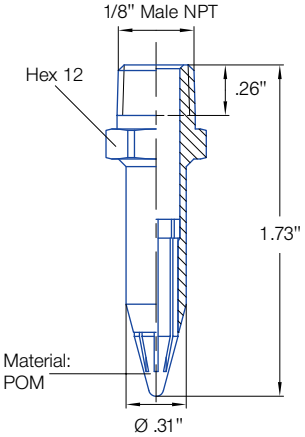
A [in]:	5.1	7.3	10.2
B [in]:	5.1	7.3	10.2



Code AA

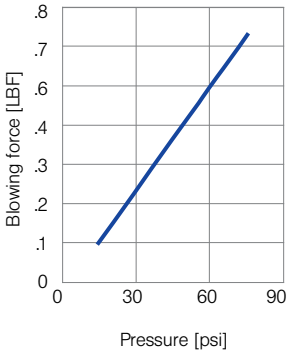


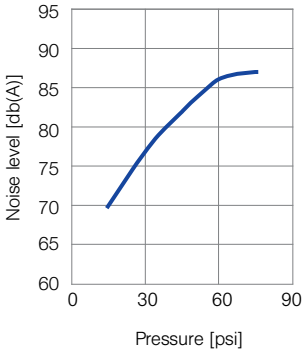
Code HG

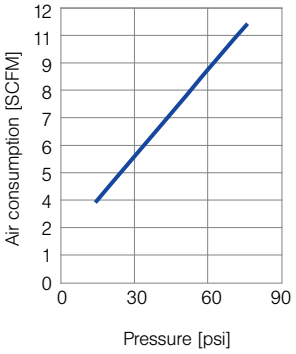


Code BA

Technical data







Ordering no.		Connection thread
Type	Conn.	
600. 388. 30 (Material: Brass/POM)	**AA**	1/8" Male BSPP
	HG	M 12 x 1.25
	BA	1/8" Male NPT

Example of ordering:	**Type**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 388. 30	**+**	**AA**	**=**	**600. 388. 30. AA**

Also as a high-temperature version of stainless steel AISI 316L available on request.

Micro multi-channel round jet nozzles for air
Series 600.625.1Y

NEW

Series 600.625.1Y

The micro multi-channel round jet nozzles of the 600.625 series generate a powerful, point of air jet. Due to its ultra-compact design, this nozzle is particularly suitable for use in locations that are difficult to reach. Since this nozzle is made completely of stainless steel AISI 316L, it meets even the highest thermal requirements. The special design at the nozzle outlet prevents air penetration into human skin. These nozzles comply with the OSHA standards.

* Complies with OSHA requirements on noise level

Cost savings	10 %

Noise reduction	6 %

Material
Stainless steel
AISI 316L

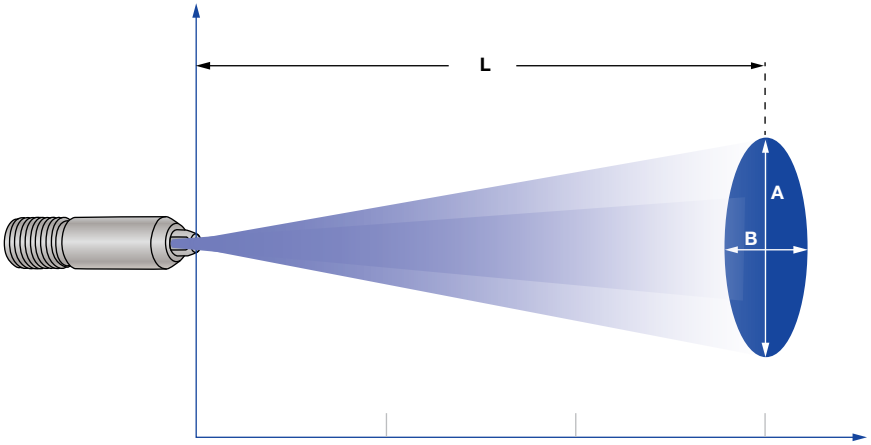
Blowing force
.1–.2 LBF at 29 psi

Noise level
63-70 db(A) at 29 psi

Air consumption
V_{LN}=1–2 SCFM at 29 psi

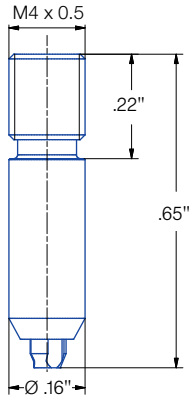
Pressure
P_{max}= 72.5 psi

Max. temperature
550°C/ 1022°F



Jet pattern of 600.625 nozzle series

Pressure:		14.5 psi	44 psi	72.5 psi
600.625.1Y.00	Distance L [in]:	9	16	20
	A [in]:	2.4	3.4	4.3
	B [in]:	2.4	3.4	4.3
600.625.1Y.10	Distance L [in]:	13.8	24	32.5
	A [in]:	3.2	4.3	6.1
	B [in]:	3.2	4.3	6.1



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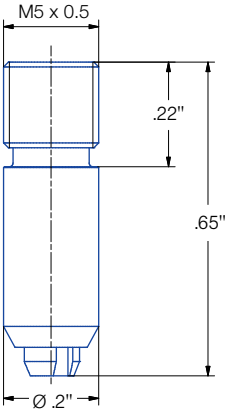

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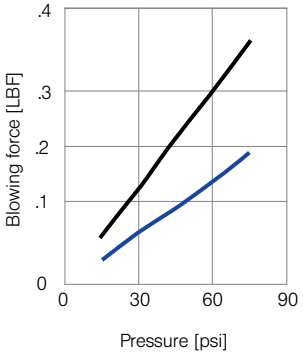
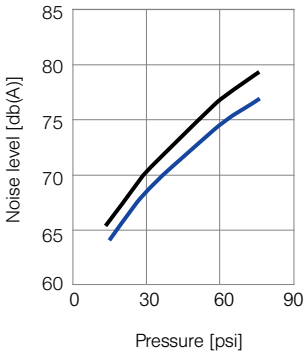
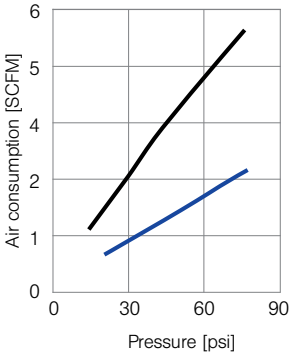
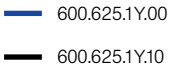
Technical data









Ordering no.		Connection thread	
Type	Mat. no. 1Y Stainless steel AISI 316L	M4 x 0.5	M5 x 0.5
600. 625	○	**00**	**-**
600. 625	○	**-**	**10**

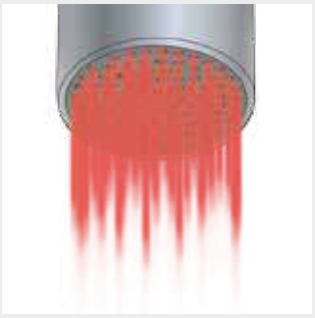
Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 625	**+**	**1Y**	**+**	**00**	**=**	**600. 625. 1Y. 00**

Maxi multi-channel round jet nozzles for air
Series 600.387.35

Series 600.387.35

The maxi multi-channel round jet nozzles of the 600.387 series generate a circular, very powerful air jet. Due to the large nozzle cross-section, these nozzles focus large quantities of air into a concentrated jet that has a powerful impact even over large distances. In spite of this, the noise level still remains low.

OSHA*



* Complies with OSHA requirements on noise level

Cost savings 15 %

Noise reduction 16 %

Materials
Brass nickel plated, PVC

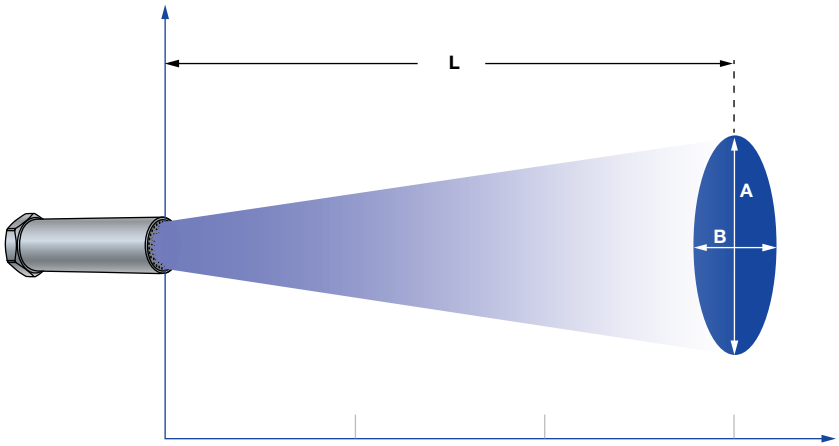
Blowing force
2.9 LBF at 29 psi

Noise level
93 db(A) at 29 psi

Air consumption
V_{LN}=92 SCFM at 29 psi

Pressure
P_{max} = 87 psi

Max. temperature
50°C/ 122°F

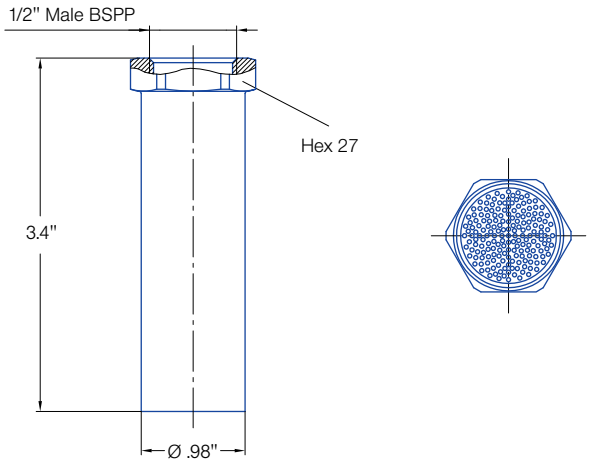


Jet pattern of 600.387 nozzle series

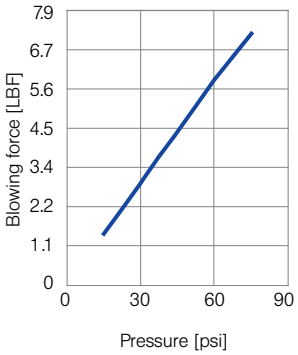
Pressure:	14.5 psi	44 psi	72.5 psi
Distance L [in]:	31.5	31.5	31.5

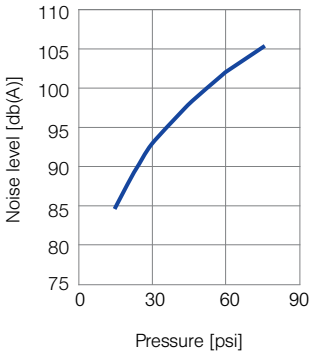
Jet dimensions at L

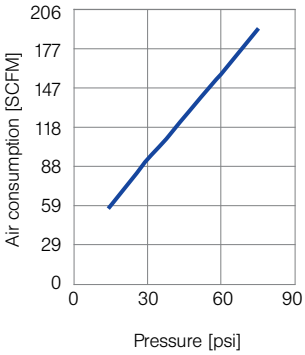
A [in]:	8.7	10	12.2
B [in]:	8.7	10	12.2



Technical data







Ordering no.		
Type	Mat. no.	Connection
	35 Brass nickel plated, PVC	1/2" Male BSPP
600. 387	○	**AH**

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	600. 387.	**+**	**35**	**+**	**AH**	**=**	**600. 387. AH. 00**

Solid jet nozzles for air or saturated steam
Series 544

Series 544

The solid jet nozzles of the 544 series generate a targeted solid jet of air. These nozzles are from Lechler's standard range, which offer a large choice of different performance ratings. The stainless steel version of this series also permits use at higher temperatures.

* Complies with OSHA requirements on noise level

Material
Stainless steel
AISI 303

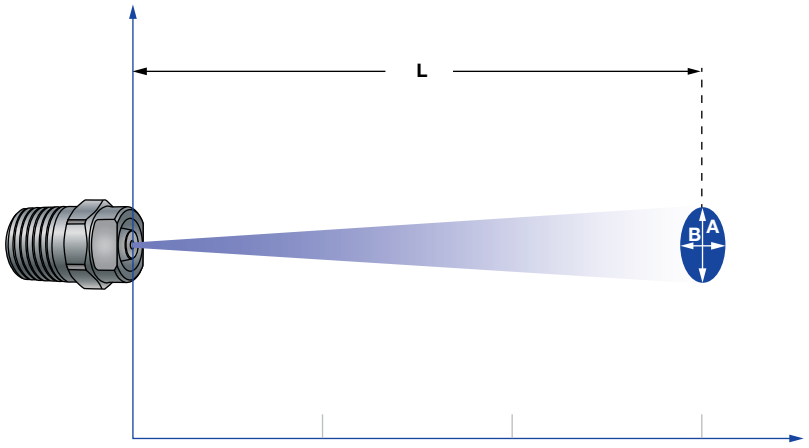
Blowing force
.06–.65 LBF at 29 psi

Noise level
65-90 db(A) at 29 psi

Air consumption
see table

Pressure
P_{max} = 435 psi

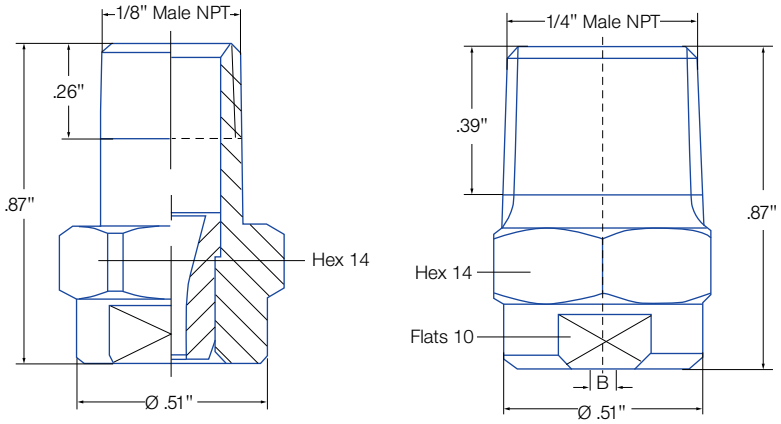
Max. temperature
550°C/ 1022°F



Jet pattern of 544 nozzle series

Pressure:		14.5 psi	44 psi	72.5 psi
544.360	Distance L [in]:	6.9	12.8	15.8
	A [in]:	2	3	4
	B [in]:	2	3	4
544.480	Distance L [in]:	9.8	15.8	18.7
	A [in]:	2.8	4.7	5.9
	B [in]:	2.8	4.7	5.9
544.640	Distance L [in]:	15.8	25.6	32.5
	A [in]:	4.1	6.9	9
	B [in]:	4.1	6.9	9

Pressure:		14.5 psi	44 psi	72.5 psi
544.800	Distance L [in]:	29.5	35	35
	A [in]:	7.1	10.2	11
	B [in]:	7.1	10.2	11



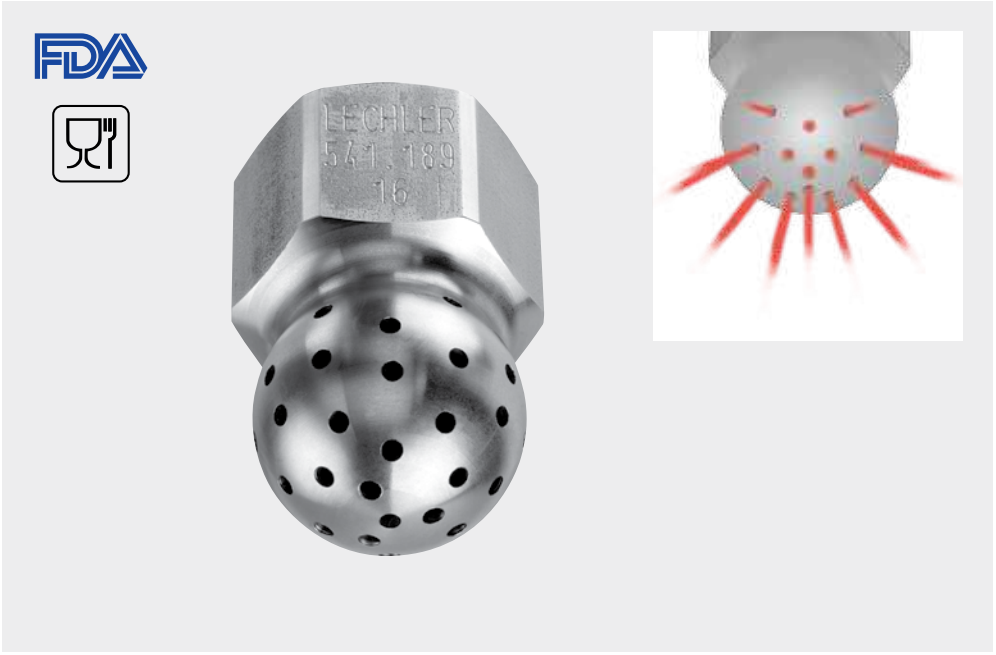
Ordering no.				Orifice diameter [in]	Capacity for Air [Standard Cubic Feet per Minute]				Capacity for Saturated Steam [lb/hr]			
Type	Mat. no. 16 AISI 303	Conn. 1/8 NPT	Conn. 1/4 NPT		10 psi	25 psi	50 psi	75 psi	10 psi	25 psi	50 psi	75 psi
544. 360	○	**BA**	**BC**	.041	.5	.6	.9	1.3	1.1	2.4	5.8	5.0
544. 400	○	**BA**	**BC**	.051	.6	1.0	1.6	2.3	2.4	5.6	8.3	8.4
544. 480	○	**BA**	**BC**	.052	.8	1.4	2.1	3.0	3.6	6.1	9.0	13
544. 560	○	**BA**	**BC**	.065	1.2	2.2	3.5	4.8	5.3	8.2	13	19
544. 640	○	**BA**	**BC**	.082	2.1	3.4	5.5	7.7	9.5	15	22	32
544. 720	○	**BA**	**BC**	.104	3.8	5.7	9.7	13	15	20	32	45
544. 800	○	**BA**	**BC**	.130	5.9	9.1	15	20	21	33	54	75

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	544. 360	**+**	**16**	**+**	**BA**	**=**	**544. 360. 16. BA**

Multiple solid stream nozzles for air or saturated steam Series 540 / 541

Series 540 / 541

The multiple solid stream nozzles of the 540/541 allow delivery of gases and other media at an angle of approx. 240° through 40 individual holes. Due to their robust design, these nozzles can be used under difficult conditions, including being immersed in liquid media.

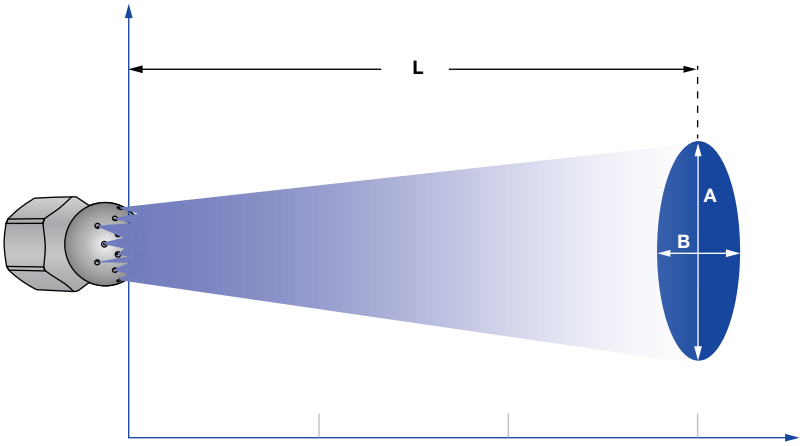


Material
Stainless steel
AISI 303

Air consumption
see table

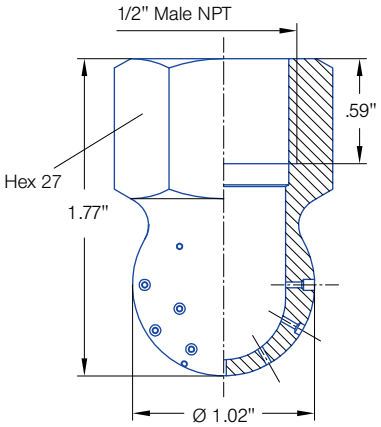
Pressure
P_{max} =145 psi

Max. temperature
200°C/ 392°F



Jet pattern of 540 / 541 nozzle series

Pressure:		14.5 psi	44 psi	72.5
540.909	**Distance L [in]:**	**14.8**	**28.5**	**33.5**
	A [in]:	3.2	6.3	6.7
	B [in]:	3.2	6.3	6.7
541.109	**Distance L [in]:**	**31.5**	**31.5**	**31.5**
	A [in]:	7.7	11.4	12.8
	B [in]:	7.7	11.4	12.8
541.239	**Distance L [in]:**	**31.5**	**31.5**	**31.5**
	A [in]:	8.7	8.9	10.2
	B [in]:	8.7	8.9	10.2



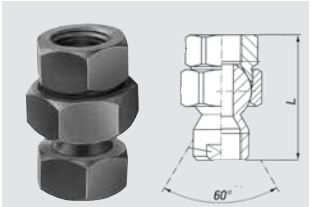
Spray angle	Ordering no.			Orifice diameter [in]	Capacity for Air [Standard Cubic Feet per Minute]				Capacity for Saturated Steam [lb/hr]			
	Type	Mat. no. 16 AISI 303	Conn. 1/2 NPT		15 psi	29 psi	44 psi	73 psi	15 psi	29 psi	44 psi	73 psi
approx. 240°	**540. 909**	○	**BH**	.032	13.4	20.1	26.8	40.2	14.7	21.7	29.1	43.6
	540. 989	○	**BH**	.039	20.9	31.4	41.8	62.7	22.9	33.7	45.4	67.9
	541. 109	○	**BH**	.059	49.0	73.5	98.0	147.0	53.8	79.3	106.6	159.4
	541. 189	○	**BH**	.079	76.3	114.5	152.6	229.0	83.9	123.7	166.3	248.6
	541. 239	○	**BH**	.091	98.4	147.6	196.8	295.2	107.5	158.5	213.2	318.8

Example of ordering:	**Type**	**+**	**Mat. no.**	**+**	**Conn.**	**=**	**Ordering no.**
	540. 909	**+**	**16**		**BH**	**=**	**544. 360. 16. BH**

Accessories
Ball joints / Nuts

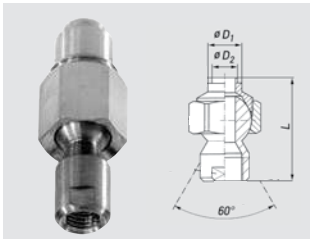
Ball joints

For swivel mounting, Lechler ball joints can be used with low-noise flat jet and round jet nozzles. 30° swivel range in all directions. No wearing seals, long-term problem free operation, even with frequent adjustment.



Ball joint with thread connection, female-female

Ordering no. Type	Material no. 303 SS/316 SS **16**	303 SS **16**	Brass **30**	Dimensions [in] Inlet	Outlet	D_1	D_2	Largest HEX	L	Weight (Brass) lb.
092. 010. xx. BB. BB	-	○	○	1/8" Female NPT	1/8" Female NPT	-	-	7/8	1.70	.09
092. 020. xx. BD. BD	-	○	○	1/4" Female NPT	1/4" Female NPT	-	-	1-1/16	2.37	.13
092. 021. xx. BF. BD	-	○	○	3/8" Female NPT	1/4" Female NPT	-	-	1-1/16	2.30	.18
092. 030. xx. BF. BF	-	○	○	3/8" Female NPT	3/8" Female NPT	-	-	1-1/8	2.23	.18



Ball joint with welding connection, female threads

092. 020. xx. SD. BB	○	-	-	-	1/8" Female NPT	.79	.59	1-1/16	2.53	.13
092. 030. xx. SF. BF	○	-	-	-	3/8" Female NPT	.87	.59	1-3/16	2.31	.18

Example for ordering:	**Type** **092. 010. xx. BB. BB**	**+** **+**	**Material no. (xx)** **16**	**=** **=**	**Ordering no.** **092. 010. 16. BB. BB**

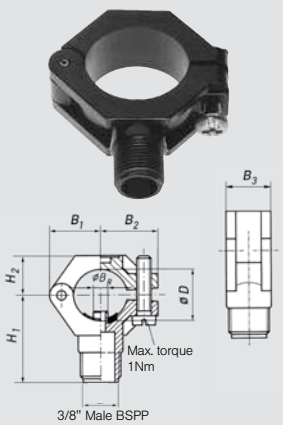
Retaining nuts

Ordering no. Type	Material no. 303 SS **16**	316 SS **17**	Brass **30**	Dimensions [in] For thread G_1	H_1	D_1	Hex	Weight (Brass) lb.
065. 200	○	○	○	3/8" BSPP	.51	-	1/2"	.06
065. 600	○	○	○	3/4" BSPP	.51	-	1 1/4"	.13

Example for ordering:	**Type** **065. 200**	**+** **+**	**Material no.** **17**	**=** **=**	**Ordering no.** **065. 200. 17**

Accessories
Eyelet clamps / Double nipples

Eyelet clamps

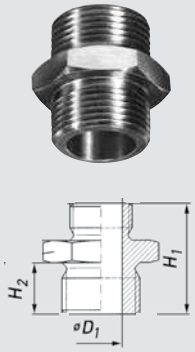


Eyelet clamp for retaining nut

Ordering no.				Screw (Material)	Dimensions [in]								Weight (Nylon)
Type	Material no.				Pipe ø	Drill hole diameter	B_R ø	B_1	B_2	B_3	H_1	H_2	
	Nylon **51**	PP **53**	PVDF **5E**										
090. 053	○	○	○	303 SS	3/8"	1/4"	.25	.75	.87	.73	1.36	.57	.05
090. 003	○	○	○		1/2"	1/4"	.25	.84	.94	.73	1.44	.65	.05
090. 013	○	○	○		3/4"	5/16"	.31	.96	1.05	.87	1.56	.69	.06
090. 023	○	○	○		1"	7/16"	.43	1.18	1.22	.87	1.73	.83	.07
090. 033	○	○	○		1 1/4"	1/2"	.51	1.34	1.40	.99	1.89	.99	.09

Example for ordering:	**Type**	**+**	**Material no.**	**=**	**Ordering no.**
	090. 053	**+**	**51**	**=**	**090. 053. 51**

Double nipples



Double nipples

Ordering no.					Dimensions [in]								Weight (Brass) lb.
Type	Material no.				Inlet	Outlet	H_1	H_2	D_1	D_2	R	HEX	
	Steel **02**	316 SS **17**	Brass **30**	PP **53**									
065. 215. xx. 11	-	○	○	-	1/4" Male NPT	3/8" Male BSPP	1.44	.56	-	-	-	11/16	.06
065. 215. xx. 12	-	○	○	-	3/8" Male NPT	3/8" Male BSPP	1.38	.50	-	-	-	11/16	.06
065. 211. xx. 15	-	○	○	-	1/2" Male NPT	3/8" Male BSPP	1.38	.50	-	-	-	7/8	.06
065. 221. xx. 11	-	○	○	-	1/2" Female NPT	3/8" Male BSPP	1.25	.56	-	-	-	11/16	.06
065. 215. xx. 10	-	○	○	-	1/4" Male NPT	11/16"-16	1.44	.56	-	-	-	11/16	.06
065. 211. xx. 10	-	○	○	-	3/8" Male NPT	11/16"-16	1.25	.50	-	-	-	11/16	.06
065. 211. xx. 14	-	○	○	-	1/2" Male NPT	11/16"-16	1.38	.50	-	-	-	7/8	.06
065. 221. xx. 10	-	○	○	-	1/4" Female NPT	11/16"-16	1.25	.56	-	-	-	11/16	.06
065. 220. xx. 10	-	○	○	-	3/8" Female NPT	11/16"-16	1.25	.54	-	-	-	7/8	.06

Example for ordering:	**Type**	**+**	**Material no. (xx)**	**=**	**Ordering no.**
	065. 215. xx. 11	**+**	**17**	**=**	**065. 215. 17. 11**

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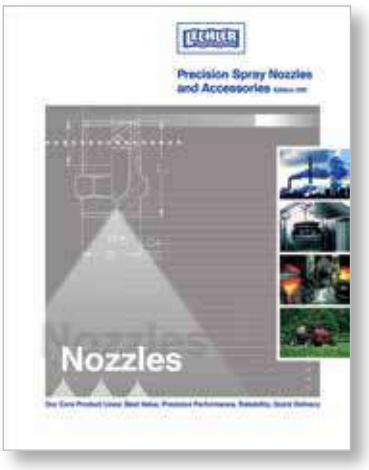
The “Precision Spray Nozzles and Accessories” catalog is a sought-after manual of nozzle technology.

It contains valuable working aids and extensive technical information on Lechler products and ordering instructions.



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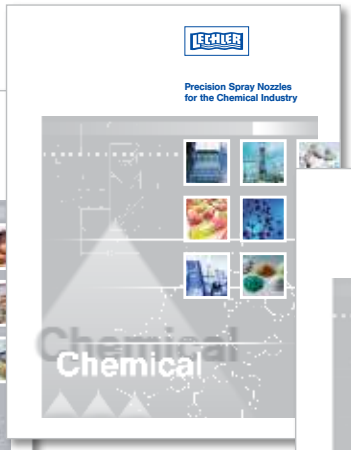

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