

ENGINEERING
YOUR SPRAY SOLUTION



NEW

Full Cone Nozzles Series 419



FreeFlow

Every millimeter counts.
Clog-proof atomization.

- Resists clogging
- Unique swirl insert design
- Variable connection options



Material
316L SS
Castings 316 SS



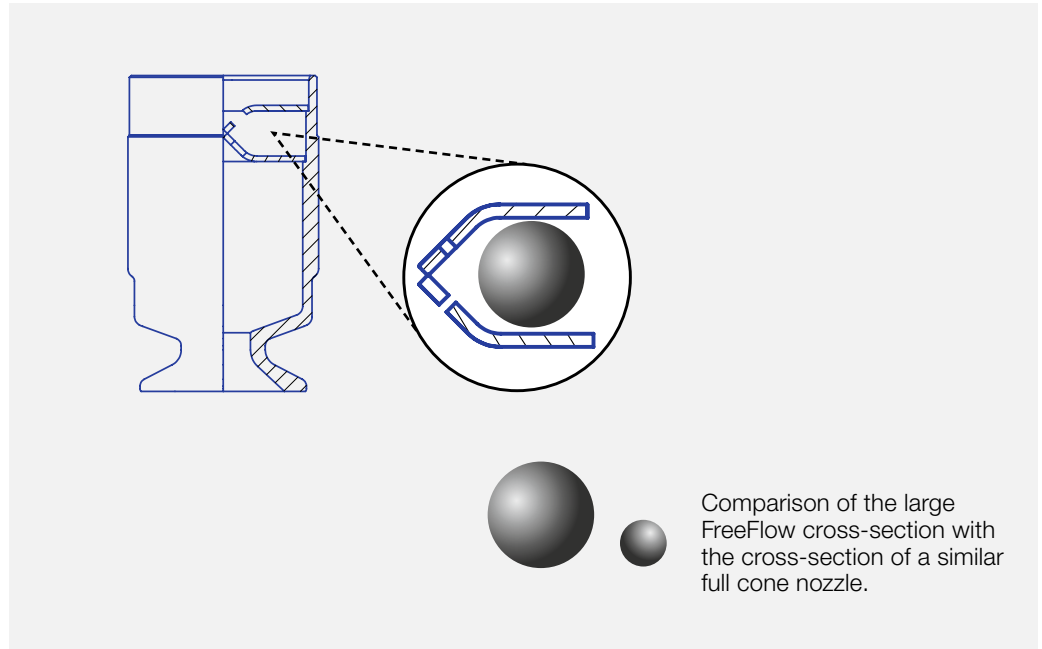
Max. temperature
400 °C



Recommended operating pressure
1 bar

Applications:

Gas washing
Spraying over packings
Dust control
Absorption
Distillation



Comparison of the large FreeFlow cross-section with the cross-section of a similar full cone nozzle.

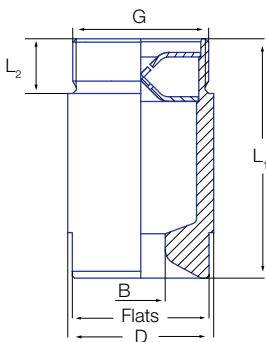


Figure 1

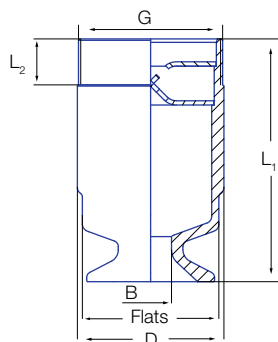


Figure 2

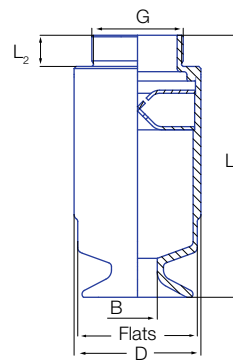
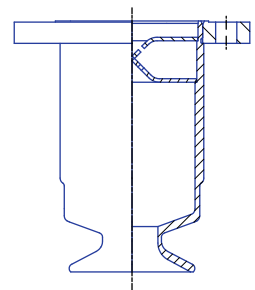


Figure 3





Other Materials and flange versions are available on request.

Nozzle-dimensions

Spray angle	Type	Code	Figure	Dimensions [mm]					Weight
				G BSPP male	L ₁	L ₂	D	Flats	
90° + 120°	419.3XX	AR	3	G 1 1/2	132	22	64	60	1,500 g
		AV	1	G 2	105	24	64	60	1,200 g
	419.4XX	AV	3	G 2	163	24	80	75	2,000 g
		AY	2	G 2 1/2	134	27	80	75	1,700 g
	419.51X 419.54X	AV	3	G 2	199	24	102	95	3,700 g
		AY	3	G 2 1/2	202	27	102	95	3,800 g
		LA	3	G 3	205	30	102	95	5,200 g
		LC	2	G 3 1/2	169	32	102	95	3,200 g
	419.57X	AY	3	G 2 1/2	231	27	115	105	5,200 g
		LA	3	G 3	233	30	115	105	5,200 g
		LE	2	G 4	194	36	115	105	4,400 g
	419.6XX	LA	3	G 3	252	30	122	115	5,400 g
		LC	3	G 3 1/2	254	32	122	115	5,500 g

G = Thread size · L₁ = Total Length · L₂ = Thread length · D = Outer diameter · Flats = Wrench size



Spray angle* 	Ordering no.									B Ø [mm]	E Ø [mm]	V̇ [l/min]					Spray diameter D [mm] at p = 1 bar 	
	Type	Mat.-Nr.		Code								p [bar] (p _{max} = 10 bar)					H = 500 mm	H = 1,000 mm
		1Y	2P															
	316L SS	904 L	1 1/2 BSPP male	2 BSPP male	2 1/2 BSPP male	3 BSPP male	3 1/2 BSPP male	4 BSPP male			0.3	0.5	1.0	2.0	5.0			
90°	419.366	○	○	AR	AV	-	-	-	-	19.0	17.5	117	144	189	250	361	1,000	2,000
	419.396	○	○	AR	AV	-	-	-	-	21.2	17.5	140	172	227	300	433	1,000	2,000
	419.446	○	○	-	AV	AY	-	-	-	24.0	20.5	187	230	303	400	577	1,000	2,000
	419.486	○	○	-	AV	AY	-	-	-	29.0	20.5	234	287	379	500	721	1,000	2,000
	419.516	○	○	-	AV	AY	LA	LC	-	29.2	24.1	281	345	455	600	866	1,000	2,000
	419.546	○	○	-	AV	AY	LA	LC	-	33.0	24.1	332	408	538	710	1,024	1,000	2,000
	419.576	○	○	-	-	AY	LA	-	LE	35.0	27.2	398	488	644	850	1,226	1,000	2,000
	419.606	○	○	-	-	-	LA	LC	-	37.5	30.1	468	574	758	1,000	1,443	1,000	2,000
419.626	○	○	-	-	-	LA	LC	-	43.0	30.1	585	718	947	1,250	1,803	1,000	2,000	
120°	419.368	○	○	AR	AV	-	-	-	-	21.0	17.4	117	144	189	250	361	1,700	2,900
	419.398	○	○	AR	AV	-	-	-	-	24.2	17.4	140	172	227	300	433	1,700	2,900
	419.448	○	○	-	AV	AY	-	-	-	24.5	20.5	187	230	303	400	577	1,700	2,900
	419.488	○	○	-	AV	AY	-	-	-	29.5	20.5	234	287	379	500	721	1,700	2,900
	419.518	○	○	-	AV	AY	LA	LC	-	29.2	24.1	281	345	455	600	866	1,700	2,900
	419.548	○	○	-	AV	AY	LA	LC	-	34.0	24.1	332	408	538	710	1,024	1,700	2,900
	419.578	○	○	-	-	AY	LA	-	LE	35.0	28.6	398	488	644	850	1,226	1,700	2,900
	419.608	○	○	-	-	-	LA	LC	-	38.0	32.2	468	574	758	1,000	1,443	1,700	2,900
419.628	○	○	-	-	-	LA	LC	-	43.5	32.2	585	718	947	1,250	1,803	1,700	2,900	

B = Bore diameter · E = Narrowest free cross section · * Spray angle at 1 bar

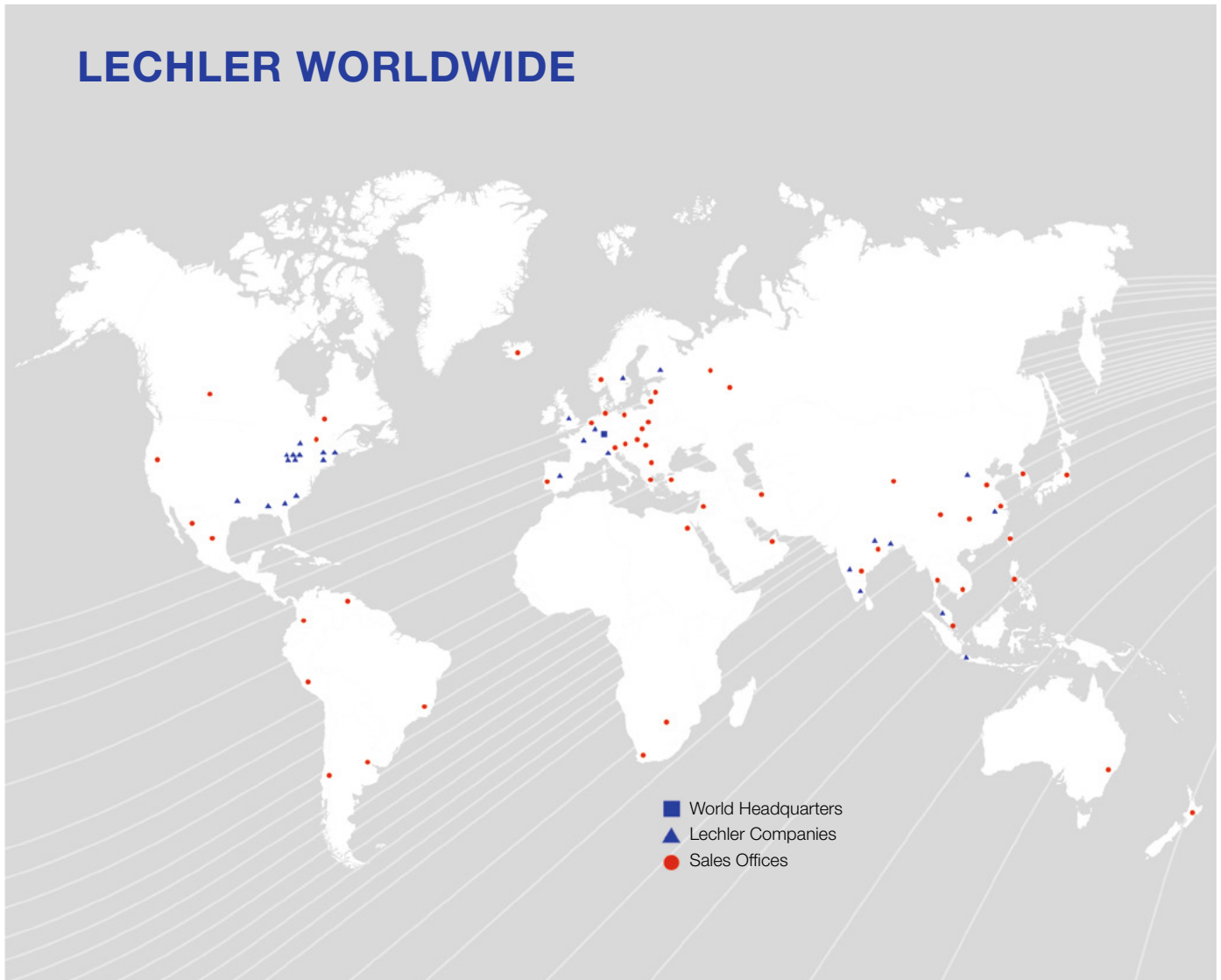
Example Type + Material-No. + Code = Ordering no.
for ordering: 419.366 + 1Y + AR = 419.366.1Y.AR

Conversion formula for the above series: $\dot{V}_2 = \dot{V}_1 * \left(\frac{p_2}{p_1}\right)^{0.4}$
(≤ 10 bar)

ENGINEERING
YOUR SPRAY SOLUTION



LECHLER WORLDWIDE



Lechler GmbH · Precision Nozzles · Nozzle Systems

P.O. Box 13 23 · 72544 Metzingen, Germany · Phone: +49 7123 962-0 · Fax: +49 7123 962-301 · info@lechler.de · www.lechler.com

ASEAN: Lechler Spray Technology Sdn. Bhd. · No. 23, Jalan Teknologi 3/3A · Taman Sains Selangor 1 · Kota Damansara, PJU 5 · 47810 Petaling Jaya · Malaysia · info@lechler.com.my

Belgium: Lechler S.A./N.V. · Avenue Mercator 6 · 1300 Wavre · Phone: +32 10 225022 · Fax: +32 10 243901 · info@lechler.be

China: Lechler Intl. Trad. Co. Ltd. · Beijing · Rm. 418 Landmark Tower · No. 8 Dong San Huan Bei Lu · Phone: +86 10 84537968, Fax: +86 10 84537458 · info@lechler.com.cn

Finland: Lechler Oy · Jäspilänkatu 18 · 04250 Kerava · Phone: +358 207 856880 · Fax: +358 207 856881 · info@lechler.fi

France: Lechler France, S.A. · Bât. CAP2 · 66-72, Rue Marceau · 93558 Montreuil · Phone: +33 1 49882600 · Fax: +33 1 49882609 · info@lechler.fr

Great Britain: Lechler Ltd. · 1 Fell Street, Newhall · Sheffield, S9 2TP · Phone: +44 114 2492020 · Fax: +44 114 2493600 · info@lechler.com

India: Lechler (India) Pvt. Ltd. · Plot B-2 · Main Road · Wagle Industrial Estate · Thane (W) · 400604 · Phone: +91 22 40634444 · Fax: +91 22 40634497 · lechler@lechlerindia.com

Italy: Lechler Spray Technology S.r.l. · Via Don Dossetti 2 · 20080 Carpiano (MI) · Phone: +39 02 98859027 · Fax: +39 02 9815647 · info@lechleritalia.com

Spain: Lechler S.A. · Avda. Pirineos 7 · Oficina B7, Edificio Inbisa I · 28700 San Sebastián de los Reyes, Madrid · Phone: +34 91 6586346 · Fax: +34 91 6586347 · info@lechler.es

Sweden: Lechler AB · Kungsängsvägen 31 B · 753 23 Uppsala · Phone: +46 18 167030 · Fax: +46 18 167031 · info@lechler.se

USA: Lechler Inc. · 445 Kautz Road · St. Charles, IL, 60174 · Phone: +1 630 3776611 · Fax: +1 630 3776657 · info@lechlerUSA.com