



Technical drawing of a solid stream nozzle. The drawing includes a side view with dimensions: a diameter of 10, a length of 22, and a hexagonal base labeled 'Hex 14' and 'Hex 10'. A top view shows a diameter of 12,55 and a hexagonal base labeled 'Hex 10'. A bottom view shows a diameter of 16 and a hexagonal base labeled 'Hex 10'. The drawing also shows a nozzle emitting a solid stream of liquid. The text 'Solid stream nozzles' is written in a large, bold, blue font across the center. The text 'Solid stream nozzles' is also written vertically on the right side of the drawing.

Solid stream nozzles

- Cleaning
- High pressure cleaning
- Jet cutting
- Recycling of liquids and many others...

Solid stream nozzles



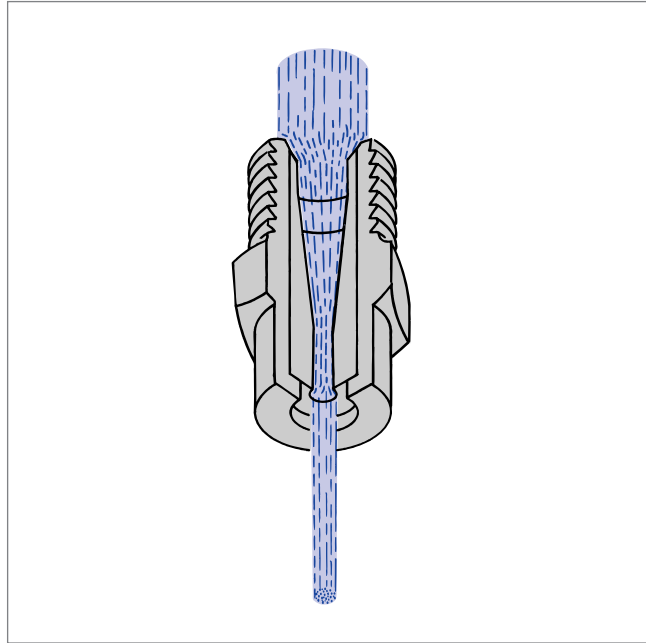
Solid stream nozzles

Thanks to optimum flow geometries, Lechler solid stream nozzles produce compact, transparent solid stream jets of defined lengths. The almost turbulence-free liquid inflow achieves excellent efficiency, even without jet stabilizer inserts.

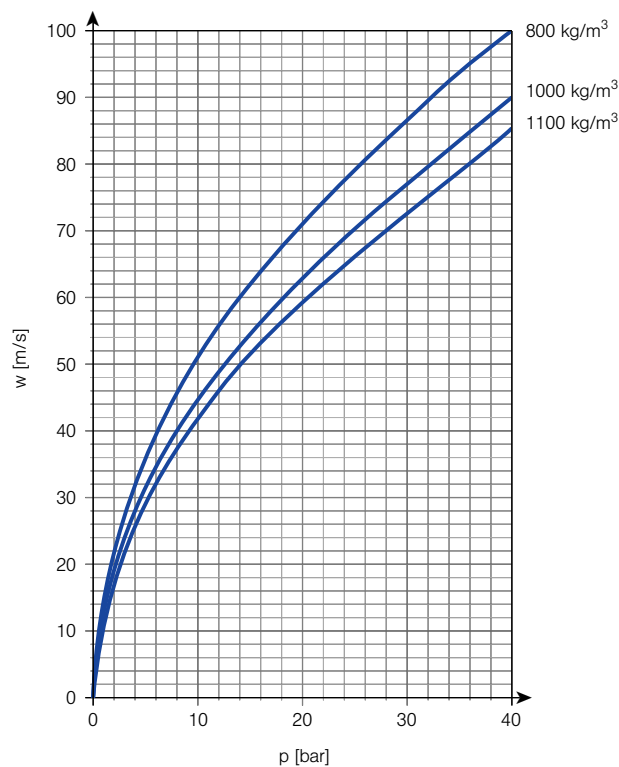
For all cleaning processes, cutting operations and applications requiring perfect, punctiform jet impacts, i.e. whenever the point is to generate concentrated jet power, the precision of Lechler solid stream nozzles enhances productivity and performance of your plant.

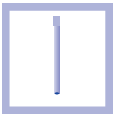
There is a comprehensive range of solid stream nozzles in stainless steel with special hardening or with TC inserts for high-pressure use.

Lechler high-pressure solid stream nozzles excel in closed, stable and powerful solid jets, not even breaking at very high pressures.



Typical exit speed of solid stream nozzles





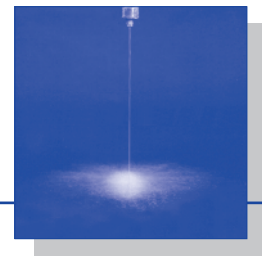
Solid stream nozzles

Low-pressure nozzles	Series	\dot{V} [l/min] at p = 2 bar	Connection	Application/ Design	Page
	544	0,04 – 10,00	1/8 BSPT 1/4 BSPT	Cleaning installations. Optimized flow technology. Extreme jet power. Concentrated solid stream jet.	5.4
	540 541	18,00 – 118,00	1/2 BSPP	Storage tank cleaning, aerating of bulk goods, recycling of liquids, as well as for accelerating chemical process reactions. Cluster solid stream nozzle.	Please refer to "Tank cleaning nozzles" and "Air nozzles"
High-pressure nozzles	Series	\dot{V} [l/min]	Connection	Application/ Design	Page
	546 548 550	4,04 – 40,80 (at 80 bar)	1/8 BSPT 1/4 BSPT NPT 1/8 NPT 1/4 Assembly with lock nut	High-pressure cleaning	5.5



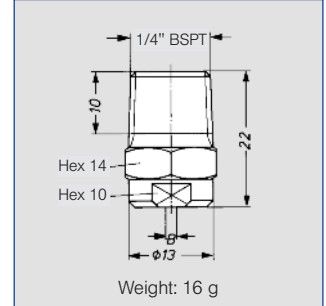
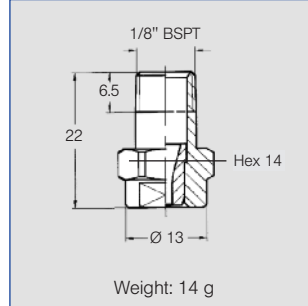
Solid stream nozzles

Series 544



Long, closed jet with punctiform impact pattern.
Optimized flow conditions.
Highest jet power. Concentrated solid stream jet.

Applications:
 Cleaning installations.



Ordering no.					B Ø [mm]	\dot{V} [l/min]									
Type	Mat.-no.		Code			p [bar]									
	16	30	CA	CC		0,5	1,0	2,0	[US gal./min] at 40 psi	3,0	5,0	10,0	15,0	20,0	30,0
	1.4305/303 SS	Brass			1/8" BSPT	1/4" BSPT									
544. 110	○	○	CA	CC	0,23	0,02	0,03	0,04	0,01	0,05	0,06	0,09	0,11	0,13	0,15
544. 160	○	-	CA	CC	0,33	0,03	0,04	0,06	0,02	0,07	0,09	0,13	0,16	0,19	0,23
544. 200	○	○	CA	CC	0,39	0,05	0,07	0,10	0,03	0,12	0,16	0,22	0,27	0,32	0,39
544. 240	○	-	CA	CC	0,50	0,08	0,11	0,16	0,05	0,20	0,25	0,36	0,44	0,51	0,62
544. 280	○	-	CA	CC	0,63	0,13	0,18	0,25	0,08	0,31	0,40	0,56	0,68	0,79	0,97
544. 320	○	○	CA	CC	0,80	0,20	0,28	0,40	0,12	0,49	0,63	0,89	1,10	1,26	1,55
544. 360	○	○	CA	CC	0,84/1,05*	0,32	0,45	0,63	0,20	0,77	1,00	1,41	1,73	1,99	2,44
544. 400	○	○	CA	CC	1,03/1,30*	0,50	0,71	1,00	0,31	1,22	1,58	2,24	2,74	3,16	3,87
544. 480	○	-	CA	CC	1,33	0,80	1,13	1,60	0,50	1,96	2,53	3,58	4,38	5,06	6,20
544. 560	○	-	CA	CC	1,69	1,25	1,77	2,50	0,78	3,06	3,95	5,59	6,85	7,91	9,68
544. 640	○	-	CA	CC	2,09	2,00	2,83	4,00	1,24	4,90	6,32	8,94	10,95	12,65	15,49
544. 720	○	-	CA	CC	2,66	3,15	4,45	6,30	1,95	7,72	9,96	14,09	17,25	19,92	24,40
544. 800	○	-	CA	CC	3,30	5,00	7,07	10,00	3,10	12,25	15,81	22,36	27,39	31,62	38,73

Material brass
 B = bore diameter
 Can also be used for air or steam (see page 6.9).

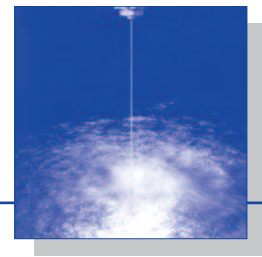
The folded page at the end of the catalogue will give you a survey on the various assembly possibilities.
For complete assembly accessories, please refer to »Accessories«.

Example	Type	+	Material no.	+	Code	=	Ordering no.
for ordering:	544. 110	+	16	+	CC	=	544. 110.16.CC



High-pressure solid stream nozzles

Series 546 / 548 / 550



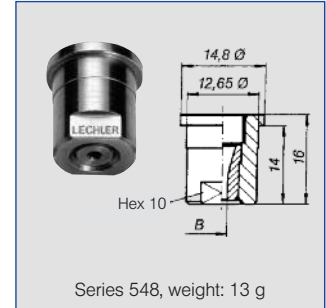
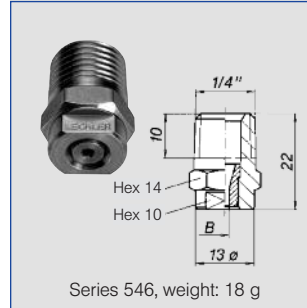
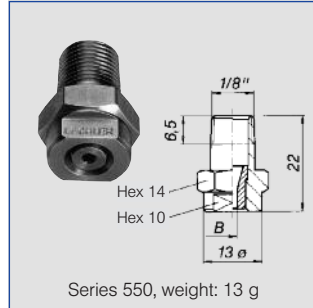
Punctiform, extremely tight, non-dispersing solid stream. Highest impact.

Applications:

High-pressure cleaning, cutting and separating.

Materials:

Nozzle body: Stainless steel 1.4305/303SS
 Insert: hardened steel 1.4034S



[US gal/min.] at 40 psi	Nozzle Code			Flow rate code	B Ø [mm]	\dot{V} [l/min] (Tolerance $\pm 2\%$)						
	Connection		Retaining nut			p [bar]						
	1/8"	1/4"				40	60	80	100	150	200	300
02	550	546	548	360	0,84	2,86	3,50	4,04	4,52	5,54	6,39	7,83
03	550	546	548	400	1,03	4,31	5,28	6,10	6,82	8,35	9,64	11,81
034	550	546	548	410	1,07	4,70	5,80	6,70	7,49	9,17	10,59	12,97
035	550	546	548	420	1,11	5,06	6,20	7,16	8,00	9,80	11,32	13,86
04	550	546	548	450	1,19	5,80	7,10	8,20	9,17	11,23	12,97	15,88
045	550	546	548	470	1,26	6,54	8,00	9,25	10,34	12,66	14,62	17,91
05	550	546	548	480	1,33	7,29	8,92	10,30	11,52	14,11	16,29	19,95
055	550	546	548	500	1,39	7,96	9,75	11,26	12,59	15,42	17,80	21,81
06	550	546	548	520	1,46	8,70	10,66	12,31	13,76	16,85	19,46	23,83
08	550	546	548	570	1,69	11,48	14,06	16,23	18,15	22,23	25,67	31,44
10	550	546	548	600	1,88	14,32	17,54	20,25	22,64	27,73	32,02	39,21
15	550	546	548	670	2,30	21,60	26,46	30,55	34,16	41,84	48,31	59,17
20	550	546	548	720	2,66	28,85	35,34	40,80	45,62	55,87	64,52	79,02

B = bore diameter

Connection code	Connection	p _{max} [bar]
A3. 00	BSPT	ca. 350
A3. 07	NPT	ca. 350
A3. 29	Lock nut	ca. 200

Example for ordering: Nozzle Code 550 + Flow rate code 360 + Connection code A3. 07 = Ordering no. 550. 360. A3. 07 (Solid stream; 4,52 l/min. at 100 bar; 1/8" NPT)

Conversion formula for the above series: $\dot{V}_2 = \dot{V}_1 * \sqrt{\frac{p_2}{p_1}}$



