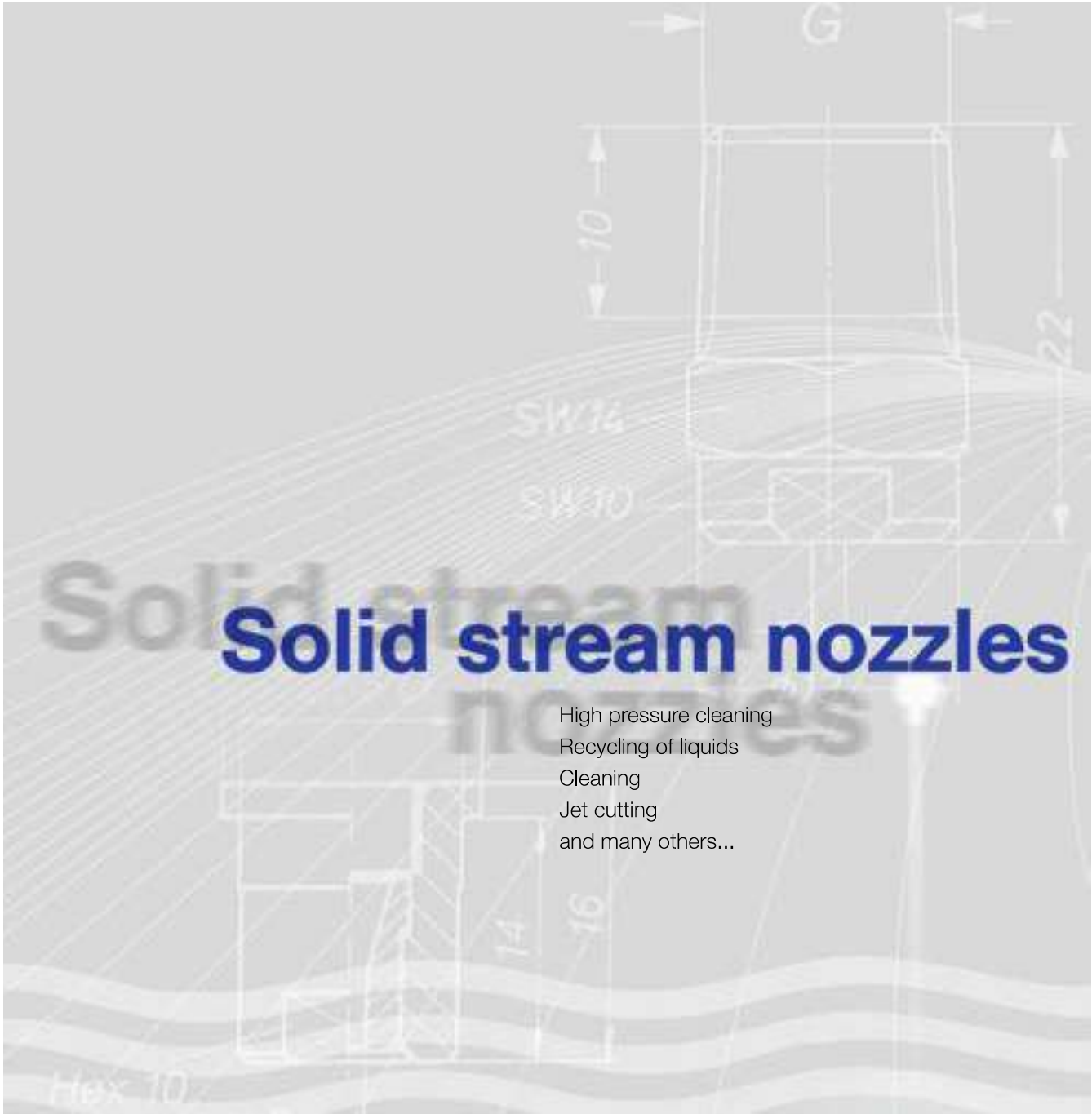


ENGINEERING
YOUR SPRAY SOLUTION



Solid stream
nozzles



Solid stream nozzles

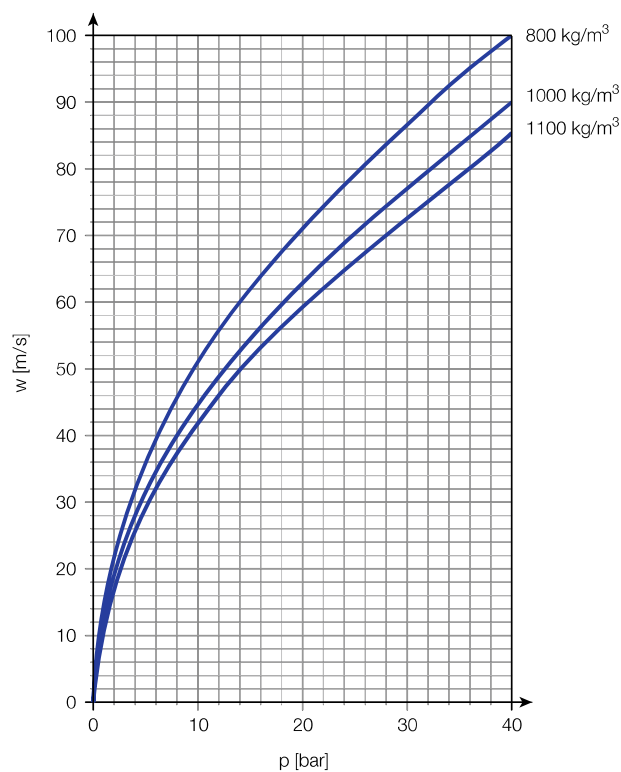
Thanks to optimum flow geometries, **Lechler solid stream nozzles** produce compact, transparent solid stream jets of defined lengths. The almost turbulence-free liquid inflow achieves excellent efficiency, even without jet stabilizer inserts. For all cleaning processes, cutting operations and applications 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.



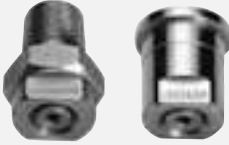


Typical exit speed of solid stream nozzles





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.	5.6
High-pressure nozzles	Series	\dot{V} [l/min] at p = 80 bar	Connection	Application/ Design	Page
	546 548 550	2.04 – 63.20	1/8 BSPT 1/4 BSPT NPT 1/8 NPT 1/4 Assembly with lock nut	High-pressure cleaning	5.5

Solid stream nozzles



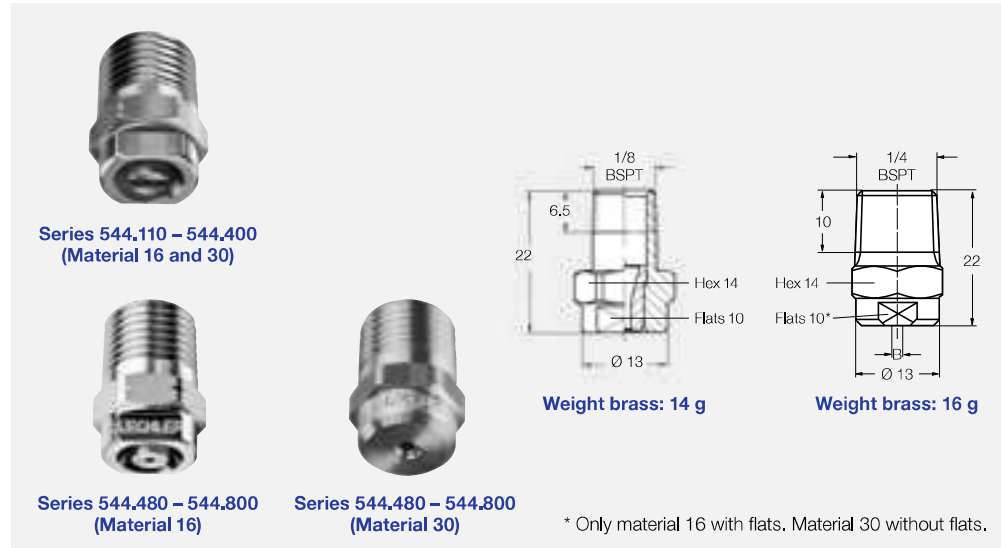
Solid stream nozzles Series 544



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	1/8 BSPT	1/4 BSPT		0.5	1.0	2.0	3.0	5.0	10.0	15.0	20.0	30.0	
544,110	○	○	CA	CC	0,23	0,02	0,03	0,04	0,05	0,06	0,09	0,11	0,13	0,15	
544,160	○	-	CA	CC	0,33	0,03	0,04	0,06	0,07	0,09	0,13	0,16	0,19	0,23	
544,200	○	○	CA	CC	0,39	0,05	0,07	0,10	0,12	0,16	0,22	0,27	0,32	0,39	
544,240	○	-	CA	CC	0,50	0,08	0,11	0,16	0,20	0,25	0,36	0,44	0,51	0,62	
544,280	○	-	CA	CC	0,63	0,13	0,18	0,25	0,31	0,40	0,56	0,68	0,79	0,97	
544,320	○	○	CA	CC	0,80	0,20	0,28	0,40	0,49	0,63	0,89	1,10	1,26	1,55	
544,360	○	○	CA	CC	1,05	0,32	0,45	0,63	0,77	1,00	1,41	1,73	1,99	2,44	
544,400	○	○	CA	CC	1,30	0,50	0,71	1,00	1,22	1,58	2,24	2,74	3,16	3,87	
544,480	○	○	CA	CC	1,33	0,80	1,13	1,60	1,96	2,53	3,58	4,38	5,06	6,20	
544,560	○	○	CA	CC	1,65	1,25	1,77	2,50	3,06	3,95	5,59	6,85	7,91	9,68	
544,640	○	○	CA	CC	2,09	2,00	2,83	4,00	4,90	6,32	8,94	10,95	12,65	15,49	
544,720	○	○	CA	CC	2,66	3,15	4,45	6,30	7,72	9,96	14,09	17,25	19,92	24,40	
544,800	○	○	CA	CC	3,30	5,00	7,07	10,00	12,25	15,81	22,36	27,39	31,62	38,73	

B = bore diameter

Can also be used for air or steam (see page 6,10).

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:

303 SS

Insert:

Hardened steel 420F SS



Series 546, weight: 18 g

Series 548, weight: 13 g

Series 550, weight: 13 g

US gal/min, at 40 psi	Nozzle-Code			Flow rate code	B Ø [mm]	V [l/min]							
	Connection					p [bar]							
	1/8	1/4	Retaining nut			40	60	80	100	120	150	200	300
01	550	546	548	300	0.60	1.44	1.77	2.04	2.28	2.50	2.79	3.22	3.95
02	550	546	548	360	0.84	2.88	3.53	4.08	4.56	5.00	5.58	6.45	7.90
025	550	546	548	380	0.94	3.60	4.42	5.10	5.70	6.24	6.98	8.06	9.87
027	550	546	548	390	0.99	3.89	4.76	5.50	6.15	6.74	7.53	8.70	10.65
03	550	546	548	400	1.03	4.33	5.30	6.12	6.84	7.49	8.38	9.67	11.85
034	550	546	548	410	1.07	4.90	6.00	6.93	7.75	8.49	9.49	10.96	13.42
035	550	546	548	420	1.11	5.05	6.18	7.14	7.98	8.74	9.77	11.29	13.82
038	550	546	548	440	1.15	5.48	6.71	7.75	8.66	9.49	10.61	12.25	15.00
04	550	546	548	450	1.19	5.77	7.06	8.16	9.12	9.99	11.17	12.90	15.80
045	550	546	548	470	1.26	6.49	7.95	9.18	10.26	11.24	12.57	14.51	17.77
05	550	546	548	480	1.33	7.21	8.83	10.20	11.40	12.49	13.96	16.12	19.75
055	550	546	548	500	1.39	7.93	9.71	11.22	12.54	13.74	15.36	17.73	21.72
06	550	546	548	520	1.46	8.65	10.60	12.24	13.68	14.99	16.75	19.35	23.69
065	550	546	548	530	1.51	9.37	11.48	13.26	14.82	16.23	18.15	20.96	25.67
070	550	546	548	540	1.58	10.09	12.36	14.28	15.96	17.48	19.55	22.57	27.64
074	550	546	548	550	1.62	10.67	13.07	15.09	16.87	18.48	20.66	23.86	29.22
08	550	546	548	570	1.69	11.54	14.13	16.31	18.24	19.98	22.34	25.80	31.59
087	550	546	548	580	1.76	12.54	15.36	17.74	19.83	21.72	24.29	28.04	34.35
089	550	546	548	590	1.78	12.83	15.72	18.15	20.29	22.23	24.85	28.69	35.14
10	550	546	548	600	1.88	14.41	17.65	20.38	22.79	24.97	27.91	32.23	39.47
11	550	546	548	620	1.97	15.86	19.42	22.42	25.07	27.46	30.70	35.45	43.42
124	550	546	548	640	2.09	17.87	21.89	25.28	28.26	30.96	34.61	39.97	48.95
131	550	546	548	650	2.15	18.89	23.13	26.71	29.86	32.71	36.57	42.23	51.72
139	550	546	548	660	2.22	20.04	24.54	28.34	31.68	34.70	38.80	44.80	54.87
15	550	546	548	670	2.30	21.62	26.48	30.58	34.19	37.45	41.87	48.35	59.22
165	550	546	548	690	2.41	23.79	29.13	33.64	37.61	41.20	46.06	53.19	65.14
174	550	546	548	700	2.48	25.08	30.72	35.47	39.66	43.45	48.57	56.09	68.69
183	550	546	548	710	2.55	26.38	32.31	37.31	41.71	45.69	51.08	58.99	72.24
20	550	546	548	720	2.66	28.83	35.31	40.78	45.59	49.94	55.84	64.47	78.96
218	550	546	548	740	2.77	31.43	38.49	44.44	49.69	54.43	60.86	70.27	86.07
25	550	546	548	760	2.96	36.04	44.14	50.97	56.99	62.43	69.80	80.60	98.71
294	550	546	548	790	3.22	42.38	51.91	59.94	67.01	73.41	82.07	94.77	116.06
310	550	546	548	800	3.30	44.69	54.73	63.20	70.66	77.40	86.54	99.93	122.39

B = bore diameter

Connection code	Connection	p _{max} * [bar]
A3.00	BSPT	ca. 700
A3.07	NPT	ca. 700
A3.29	Lock nut	ca. 300

* Only valid for operation at constant pressure

Example for ordering: Nozzle code 550 + Flow rate code 300 + Connection code A3.07 = Ordering no. 550.300.A3.07 (Solid stream; 2.28 l/min. at 100 bar; 1/8 NPT)

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

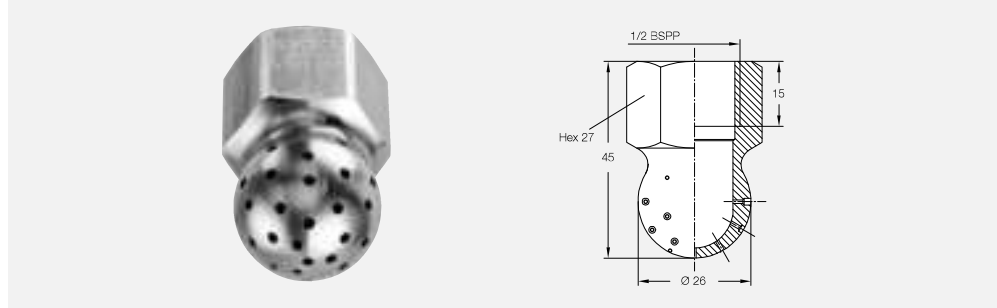



Cluster solid stream nozzle Series 540/541

**Several sharp solid jets.
Also to use with air or saturated steam (see chapter "Air nozzles").**

Applications:

Storage tank cleaning, aerating of bulk goods, recycling of liquids, as well as for accelerating chemical process reactions.



Spray angle 	Ordering no.		E Ø [mm]	Ṃ [l/min]			
	Type	Mat no.		p [bar]			
		16		0.5	2	5	40 psi [US gal./min]
approx. 240°	540.909	○	0.8	9.0	18.0	28.5	5.6
	540.989	○	1.0	14.0	28.0	44.3	8.7
	541.109	○	1.5	28.5	57.0	90.1	17.7
	541.189	○	2.0	45.0	90.0	142.3	27.9
	541.239	○	2.3	59.0	118.0	186.6	36.6

E = narrowest free cross section

Example **Type** + **Material-no.** = **Ordering no.**
for ordering: **540.909** + **16** = **540.909.16**