

GAS NOZZLES FOR SOLDERING AND DESOLDERING MACHINES

ACCESSORIES

2.201



APPLICATION: SMT

ZEVAC-LINE: DRS, ONYX

The complete DRS/ONYX product line documentation is composed of the following data sheets:

MACHINES	2.103-4.102
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ACCESSORIES	2.201-2.202
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OPTIONS	2.301-2.312
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WIDE APPLICATION RANGE

Selective soldering and desoldering of all surface mounted components: from the simple chip capacitor, SO-IC, quad-flat packs, PLCC's to BGA's. The nozzles are designed to provide safe and reliable use in the ZEVAC machines.



DRS 24
High production machine unique in design and operation. Equipped with a special VISION system for accurate alignment if productivity and precision are a must.



ONYX 29
Semi-automated soldering and desoldering machine
- 7 motorized axes
- Force sensor system
- Automatic processes
- other options on demand

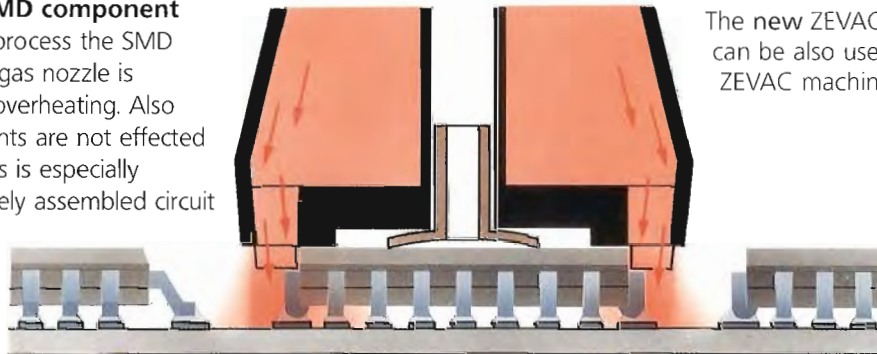


ONYX 32
Multifunctional High Precision System used for:
- Fully Automated Rework
- Flip Chip and Die Handling
- Electronic, Optoelectronic and Mechanical Micro Assembly

MARKET REQUIREMENTS FOR A HIGHLY ACCURATE GAS NOZZLES

Safety for the SMD component

During the solder process the SMD component in the gas nozzle is protected against overheating. Also adjacent components are not effected to overheating. This is especially important on densely assembled circuit boards.



The new ZEVAC gas nozzle line can be also used on older ZEVAC machines.

Guarantee of high accuracy

New generation of soldering and desoldering machines should have an accuracy of ± 0.02 mm. Design of gas nozzle should assure that even fine pitch components can be precisely soldered and desoldered.



Easy nozzle change

The nozzle support guarantees a quick and easy change.

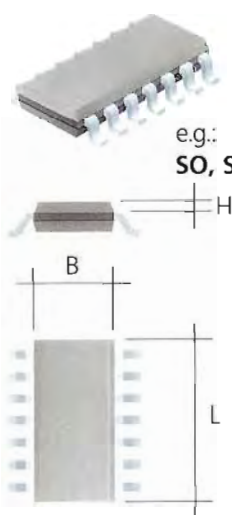
Standard / Special gas nozzles

For standard components, standard gas nozzles are available. For non standard components, special nozzles can be built in a short delivery time.

- 1 Quick change support
- 2 Vacuum cup
- 3 Nozzle nest
(corresponds to the component housing)
- 4 Gas openings

GAS NOZZLES A

FOR SMD TYPE:



Rectangular «Gull-Wing» connections on the **lengthside**
e.g.:
SO, SOM, SOL, VSO

ZEVAC Hot gas limited on **A** gas nozzles



STANDARD

Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 16 A 20	0,159	4,0	0,198	5,0	0,030	0,80
N 16 A 34	0,159	4,0	0,345	8,8	0,030	0,80
N 16 A 39	0,159	4,0	0,395	10,0	0,030	0,80
N 30 A 41	0,300	7,6	0,414	10,5	0,030	0,80
N 30 A 51	0,300	7,6	0,513	13,0	0,030	0,80
N 30 A 61	0,300	7,6	0,615	15,6	0,030	0,80
N 30 A 71	0,300	7,6	0,714	18,1	0,030	0,80
N 174 A 221	0,174	4,42	0,221	5,61	0,030	0,80
N 204 A 399	0,204	5,10	0,399	10,13	0,045	1,14
N 220 A 501	0,220	5,59	0,501	12,72	0,035	0,90
N 221 A 257	0,221	5,61	0,257	6,53	0,045	1,14
N 221 A 441	0,221	5,61	0,441	11,20	0,050	1,27
N 226 A 401	0,226	5,74	0,401	10,19	0,045	1,14
N 226 A 451	0,226	5,74	0,451	11,46	0,045	1,14
N 298 A 509	0,298	7,57	0,509	12,93	0,050	1,27
N 300 A 615	0,300	7,62	0,615	15,62	0,055	1,40
N 300 A 714	0,300	7,62	0,714	18,14	0,055	1,40
N 300 A 730	0,300	7,62	0,730	18,54	0,055	1,40
N 306 A 681	0,306	7,77	0,681	17,30	0,045	1,14
N 306 A 689	0,306	7,77	0,689	17,50	0,055	1,40
N 331 A 701	0,331	8,41	0,701	17,80	0,055	1,40
N 332 A 623	0,332	8,43	0,623	15,82	0,040	1,02
N 332 A 721	0,332	8,43	0,721	18,31	0,050	1,27
N 332 A 751	0,332	8,43	0,751	19,07	0,050	1,27
N 340 A 698	0,340	8,63	0,698	17,73	0,045	1,14
N 345 A 724	0,345	8,76	0,724	18,39	0,055	1,40
N 355 A 745	0,355	9,01	0,745	18,92	0,055	1,40
N 380 A 419	0,380	9,65	0,419	10,64	0,055	1,40
N 395 A 1025	0,395	10,03	1,025	26,03	0,055	1,40
N 438 A 859	0,438	11,12	0,859	21,82	0,050	1,27
N 445 A 815	0,445	11,30	0,815	20,70	0,055	1,40
N 446 A 816	0,446	11,33	0,816	20,73	0,055	1,40
N 462 A 826	0,462	11,73	0,826	20,98	0,055	1,40
N 525 A 819	0,525	13,33	0,819	20,80	0,055	1,40
N 859 A 1600	0,859	21,82	1,600	40,64	0,055	1,40
N 1006 A 1006	1,006	25,55	1,006	25,55	0,055	1,40
N 1103 A 1717	1,103	28,02	1,717	43,61	0,055	1,40

VACUUM CUP

Corresponding to nozzle size:



< 270
Pipette
> 270 < 410
> 410 < 960
> 960

STANDARD

Order no	Diameter	
	Inch	mm
VC 916 S-1/8" GH	1/8	3,2
VC 916 S-3/16"	3/16	4,8 (Pipette)
VC 916 S-1/4"	1/4	6,4
VC 916 S-3/8"	3/8	9,5
VC 916 S-5/8"	5/8	15,9

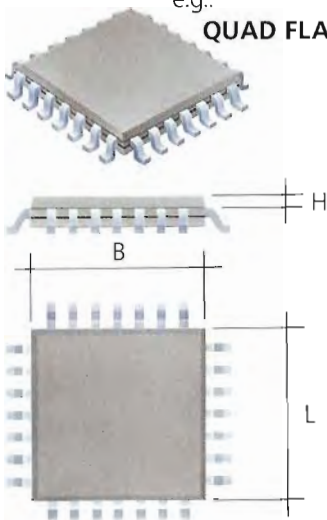
GAS NOZZLES B

FOR SMD TYPE:

Rectangular «Gull-Wing» connections on all 4 sides.

e.g.:

QUAD FLAT PACK'S



ZEVAC Hot gas limited Gas nozzles B



STANDARD

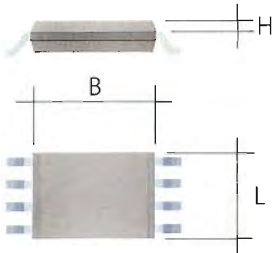
Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 35 B 35	0.354	8.99	0.354	8.99	0.055	1.40
N 45 B 45	0.454	11.53	0.454	11.53	0.055	1.40
N 65 B 65	0.654	16.61	0.654	16.61	0.055	1.40
N 95 B 95	0.954	24.23	0.954	24.23	0.050	1.27
N 115 B 115	1.154	29.31	1.154	29.31	0.050	1.27
N 226 B 271	0.226	5.74	0.271	6.88	0.045	1.14
N 289 B 289	0.289	7.34	0.289	7.34	0.040	1.02
N 295 B 495	0.295	7.49	0.495	21.57	0.055	1.40
N 296 B 431	0.296	7.52	0.431	10.95	0.040	1.02
N 328 B 495	0.328	8.33	0.495	12.57	0.055	1.40
N 359 B 359	0.359	9.12	0.359	9.12	0.055	1.40
N 370 B 409	0.370	9.40	0.409	10.39	0.045	1.14
N 380 B 419	0.380	9.65	0.419	10.64	0.050	1.27
N 392 B 392	0.392	9.96	0.392	9.96	0.030	0.76
N 402 B 402	0.402	10.21	0.402	10.21	0.045	1.14
N 407 B 407	0.407	10.34	0.407	10.34	0.055	1.40
N 451 B 551	0.451	11.46	0.551	14.00	0.055	1.40
N 459 B 561	0.459	11.66	0.561	14.25	0.055	1.40
N 473 B 473	0.473	12.01	0.473	12.01	0.055	1.40
N 515 B 515	0.515	13.08	0.515	13.08	0.050	1.27
N 530 B 530	0.530	13.46	0.530	13.46	0.055	1.40
N 550 B 550	0.550	13.97	0.550	13.97	0.050	1.27
N 551 B 788	0.551	14.00	0.788	20.02	0.055	1.40
N 560 B 560	0.560	14.22	0.560	14.22	0.055	1.40
N 564 B 801	0.564	14.33	0.801	20.35	0.055	1.40
N 605 B 766	0.605	15.37	0.766	15.37	0.055	1.40
N 689 B 689	0.689	17.50	0.689	17.50	0.060	1.52
N 735 B 735	0.735	18.67	0.735	18.67	0.055	1.40
N 778 B 778	0.778	19.76	0.778	19.76	0.055	1.40
N 861 B 861	0.861	21.87	0.861	21.87	0.060	1.52
N 867 B 867	0.867	22.02	0.867	22.02	0.055	1.40
N 876 B 876	0.876	22.25	0.876	22.25	0.055	1.40
N 936 B 936	0.936	23.77	0.936	23.77	0.060	1.52
N 940 B 940	0.940	23.88	0.940	23.88	0.055	1.40
N 963 B 963	0.963	24.46	0.963	24.46	0.050	1.27
N 1002 B 1002	1.002	25.45	1.002	25.45	0.055	1.40
N 1026 B 1026	1.026	26.06	1.026	26.06	0.055	1.40
N 1074 B 1074	1.074	27.28	1.074	27.28	0.055	1.40
N 1103 B 1103	1.103	28.02	1.103	28.02	0.055	1.40
N 1111 B 1111	1.111	28.22	1.111	28.22	0.055	1.40
N 1225 B 1225	1.225	31.11	1.225	31.11	0.055	1.40
N 1252 B 1252	1.252	31.80	1.252	31.80	0.055	1.40
N 1261 B 1261	1.261	32.03	1.261	32.03	0.055	1.40
N 1353 B 1353	1.353	34.37	1.353	34.37	0.060	1.52
N 1426 B 1426	1.426	36.22	1.426	36.22	0.060	1.52
N 1583 B 1583	1.583	40.21	1.583	40.21	0.055	1.40
N 1600 B 1600	1.600	40.64	1.600	40.64	0.055	1.40
N 1642 B 1642	1.642	41.71	1.642	41.71	0.060	1.52

GAS NOZZLES C

FOR SMD TYPE:

Rectangular «Gull-Wing» connections on the two short sides

e.g.: **TSOP**



ZEVAC Hot gas limited on gas nozzles **C**



STANDARD

Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 135 C 190	0.135	3.43	0.190	4.83	0.045	1.14
N 155 C 330	0.155	3.94	0.330	8.38	0.055	1.40
N 157 C 182	0.157	3.40	0.182	4.62	0.055	1.40
N 175 C 255	0.175	4.44	0.255	6.48	0.055	1.40
N 177 C 252	0.177	4.50	0.252	6.40	0.055	1.40
N 182 C 300	0.182	4.62	0.300	7.62	0.050	1.27
N 190 C 317	0.190	4.83	0.317	8.05	0.055	1.40
N 237 C 278	0.237	6.02	0.278	7.06	0.055	1.40
N 316 C 470	0.316	8.03	0.470	11.94	0.055	1.40
N 320 C 729	0.320	8.13	0.729	18.52	0.055	1.40
N 323 C 476	0.323	8.20	0.476	12.09	0.055	1.40
N 324 C 733	0.324	8.23	0.733	18.62	0.055	1.40
N 351 C 465	0.351	8.92	0.465	11.81	0.055	1.40
N 371 C 545	0.371	9.42	0.545	13.84	0.055	1.40
N 404 C 734	0.404	10.26	0.734	18.64	0.055	1.40
N 553 C 604	0.553	14.05	0.604	15.34	0.055	1.40
N 635 C 824	0.635	16.13	0.824	20.93	0.055	1.40
N 734 C 997	0.734	18.64	0.997	25.32	0.055	1.40
N 1187 C 1207	1.187	30.15	1.207	30.66	0.055	1.40

GAS NOZZLES D

FOR SMD TYPE:

Discretes round and rectangular «J-leaded», «Gull-Wing» or «leadless» connections

e.g.: **CHIP RESISTORS**
CHIP CONDENSORS
SOT, MELF
Further applications: conventional solder joints



ZEVAC Hot gas limited on gas nozzles **D**



STANDARD

Order no	Inside diameter / gas outlet	
	Inch	mm
	N 03 D	0.030
N 12 D	0.120	3.0
N 12 DV	0.120	3.0
N 19 D	0.190	4.75
N 19 DV	0.190	4.75
N 28 D	0.280	7.11
N 28 DV	0.280	7.11
N 31 D	0.310	7.87
N 36 D	0.360	9.14
N 53 D	0.530	13.46
N 60 DV	0.600	15.24
N 354 D	0.354	8.99

GAS NOZZLES E

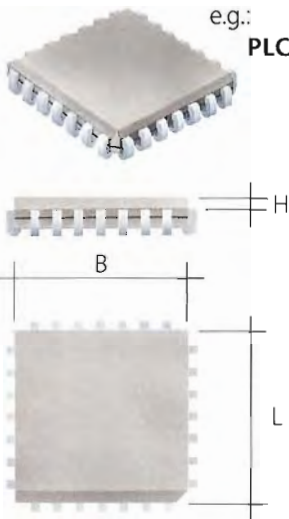
FOR SMD TYPE:

Rectangular

«J-leaded» connections on all 4 sides.

e.g.:

PLCC, LCCC



ZEVAC hot gas limited on gas nozzles E



STANDARD

Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 35 E 35	0,354	8,99	0,354	8,99	0,055	1,40
N 45 E 45	0,454	11,53	0,454	11,53	0,055	1,40
N 65 E 65	0,654	16,61	0,654	16,61	0,055	1,40
N 95 E 95	0,954	24,23	0,954	24,23	0,050	1,27
N 115 E 115	1,154	29,31	1,154	29,31	0,050	1,27
N 247 E 247	0,247	6,27	0,247	6,27	0,050	1,27
N 286 E 351	0,286	7,26	0,351	8,92	0,050	1,27
N 290 E 430	0,290	7,37	0,430	10,92	0,055	1,40
N 290 E 491	0,290	7,37	0,491	12,47	0,055	1,40
N 295 E 495	0,295	7,49	0,495	12,57	0,055	1,40
N 301 E 401	0,301	7,65	0,401	10,19	0,055	1,40
N 310 E 310	0,310	7,87	0,310	7,87	0,055	1,40
N 342 E 342	0,342	8,69	0,342	8,69	0,055	1,40
N 352 E 552	0,352	8,94	0,552	14,02	0,045	1,14
N 359 E 359	0,359	9,12	0,359	9,12	0,055	1,40
N 362 E 362	0,362	9,19	0,362	9,19	0,055	1,40
N 407 E 407	0,407	10,34	0,407	10,34	0,055	1,40
N 412 E 412	0,412	10,46	0,412	10,46	0,055	1,40
N 432 E 432	0,432	10,97	0,432	10,97	0,050	1,27
N 445 E 552	0,445	11,30	0,552	14,02	0,055	1,40
N 451 E 551	0,451	11,46	0,551	14,00	0,055	1,40
N 452 E 452	0,452	11,48	0,452	11,48	0,095	2,41
N 457 E 557	0,457	11,61	0,557	14,15	0,055	1,40
N 459 E 459	0,459	11,66	0,459	11,66	0,055	1,40
N 459 E 561	0,459	11,66	0,561	14,25	0,055	1,40
N 462 E 562	0,462	11,73	0,562	14,27	0,055	1,40
N 482 E 482	0,482	12,24	0,482	12,24	0,050	1,27
N 494 E 494	0,494	12,55	0,494	12,55	0,055	1,40
N 560 E 560	0,560	14,22	0,560	14,22	0,055	1,40
N 574 E 574	0,574	14,58	0,574	14,58	0,055	1,40
N 659 E 659	0,659	16,74	0,659	16,74	0,060	1,52
N 662 E 662	0,662	16,81	0,662	16,81	0,055	1,40
N 735 E 735	0,735	18,67	0,735	18,67	0,055	1,40
N 745 E 745	0,745	18,92	0,745	18,92	0,055	1,40
N 757 E 757	0,757	19,23	0,757	19,23	0,060	1,52
N 763 E 763	0,763	19,38	0,763	19,38	0,055	1,40
N 795 E 795	0,795	20,19	0,795	20,19	0,055	1,40
N 867 E 867	0,867	22,02	0,867	22,02	0,055	1,40
N 936 E 936	0,936	23,77	0,936	23,77	0,060	1,52
N 957 E 957	0,957	24,31	0,957	24,31	0,060	1,52
N 963 E 963	0,963	24,46	0,963	24,46	0,050	1,27
N 967 E 967	0,967	24,56	0,967	24,56	0,055	1,40
N 1002 E 1002	1,002	25,45	1,002	25,45	0,055	1,40
N 1057 E 1057	1,057	26,85	1,057	26,85	0,055	1,40
N 1111 E 1111	1,111	28,22	1,111	28,22	0,055	1,40
N 1162 E 1162	1,162	29,51	1,162	29,51	0,060	1,52
N 1167 E 1167	1,167	29,64	1,167	29,64	0,055	1,40
N 1191 E 1191	1,191	30,25	1,191	30,25	0,055	1,40
N 1345 E 1345	1,345	34,16	1,345	34,16	0,055	1,40
N 1359 E 1359	1,359	34,52	1,359	34,52	0,055	1,40

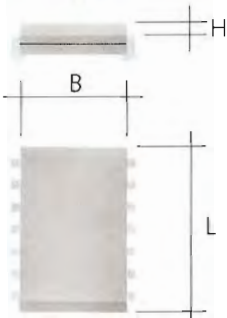
GAS NOZZLES F

FOR SMD TYPE:

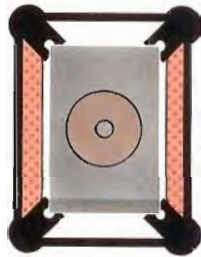
Rectangular

«J-leaded» or «leadless»

connection on
two **length sides**
e.g.:
SO, SOL, SOJ, VSO



ZEVAC hot gas limited
on gas nozzles **F**



STANDARD

Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 166 F 505	0,166	4,22	0,505	12,85	0,060	1,52
N 201 F 501	0,201	5,11	0,501	12,73	0,050	1,27
N 213 F 504	0,213	5,41	0,504	12,80	0,050	1,27
N 280 F 703	0,280	7,11	0,703	17,86	0,060	1,52
N 301 F 631	0,301	7,65	0,631	16,03	0,055	1,40
N 301 F 681	0,301	7,65	0,681	17,30	0,055	1,40
N 301 F 694	0,301	7,65	0,694	17,63	0,055	1,40
N 302 F 668	0,302	7,67	0,668	16,97	0,055	1,40
N 305 F 681	0,305	7,75	0,681	17,30	0,055	1,40
N 306 F 631	0,306	7,77	0,631	16,03	0,050	1,27
N 306 F 638	0,306	7,77	0,638	16,21	0,055	1,40
N 306 F 689	0,306	7,77	0,689	17,50	0,055	1,40
N 317 F 553	0,317	8,05	0,553	14,05	0,055	1,40
N 356 F 681	0,356	9,04	0,681	17,30	0,055	1,40
N 356 F 731	0,356	9,04	0,731	18,57	0,055	1,40
N 399 F 1203	0,399	10,13	1,203	30,56	0,055	1,40
N 406 F 731	0,406	10,31	0,731	18,57	0,055	1,40
N 440 F 826	0,440	11,17	0,826	20,98	0,055	1,40
N 478 F 1041	0,478	12,14	1,041	26,44	0,055	1,40
N 571 F 946	0,571	14,50	0,946	24,03	0,055	1,40
N 698 F 1999	0,698	17,73	1,999	50,77	0,055	1,40
N 735 F 735	0,735	18,67	0,735	18,67	0,055	1,40

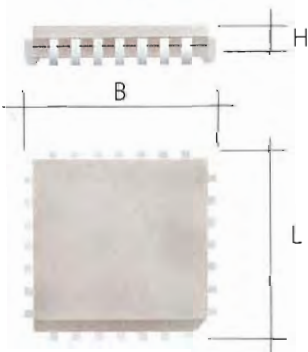
GAS NOZZLES G

FOR SMD TYPE:

Rectangular

«J-leaded» connections on
all **4 sides**.

e.g.:
PLCC



ZEVAC hot gas limited
on gas nozzles **G**

STANDARD

Order no	Dimensions					
	Width		Length		Height	
	Inch	mm	Inch	mm	Inch	mm
N 330 G 530	0,330	8,38	0,530	13,46	0,100	2,54
N 330 G 535	0,330	8,38	0,535	13,59	0,100	2,54
N 398 G 398	0,398	10,11	0,398	10,11	0,100	2,54
N 498 G 498	0,498	12,65	0,498	12,65	0,100	2,54
N 498 G 598	0,498	12,65	0,598	15,19	0,100	2,54
N 530 G 530	0,530	13,46	0,530	13,46	0,100	2,54
N 698 G 698	0,698	17,73	0,698	17,73	0,100	2,54
N 798 G 798	0,798	20,27	0,798	20,27	0,100	2,54
N 998 G 998	0,998	25,35	0,998	25,35	0,100	2,54
N 1004 G 1004	1,004	25,50	1,004	25,50	0,100	2,54
N 1198 G 1198	1,198	30,43	1,198	30,43	0,100	2,54
N 1203 G 1203	1,203	30,56	1,203	30,56	0,100	2,54
N 1345 G 1345	1,345	34,16	1,345	34,16	0,100	2,54
N 1398 G 1398	1,398	35,51	1,398	35,51	0,100	2,54



SPECIAL GAS NOZZLES NS

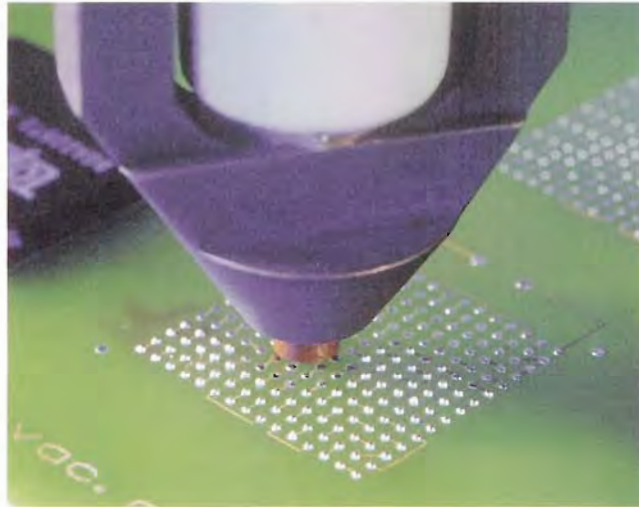
According application
e.g.:

SOCKETS
MICROPACKS
SMD CONNECTORS
OVCC (FRANCE)
BQFP

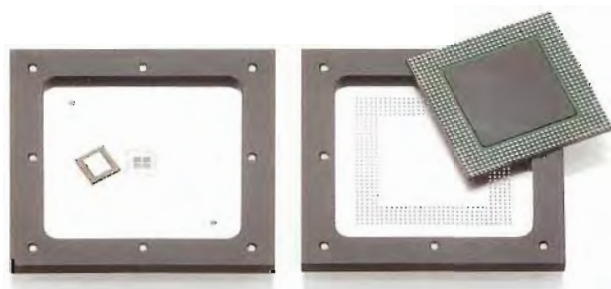
GAS NOZZLES FOR BGA AND CSP COMPONENTS

see data sheet 2.202

SITE SOLDER REMOVAL SYSTEM



MICROSTENCIL FOR PASTE APPLICATION



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