

Patented, Adjustable, Spring Loaded Vacuum Pik

The handpiece is fitted with an adjustable, spring loaded vacuum pik to lift components from the PCB and to hold the component in the nozzle during alignment.

The “give” in the spring loading is set, but the absolute position of the vacuum pik is adjustable over a 1.5" length.

The ST 325 is a digital, self-contained system that is fully programmable and can be used to remove or install surface mount components when individual or multiple operations are to be run. From the front panel, the system can be used in either manual or “timed” modes. Manual mode means that the system generates heated airflow when the cycle button is pressed; when it is pressed a second time the system shuts off. “Timed” modes allow the operator to create up to 20 “Profiles” that consist of time and temperatures parameters to ensure process control and repeatability. Both cycle start and vacuum functions are activated with conveniently located switches on the handpiece.

The ST 325 comes standard with one K-type thermo-couple input that can be used to monitor the thermal environment at the work site with optional software. The system also comes with the Lo-Flo pump and the vacuum wand (PV-65) for manipulating components manually. The heavy-duty, durable metal housing ensures years of service and the sloped face of the front panel is a standard feature for ease of use. Other ST systems can be stacked on to the ST 325 to preserve bench space. The capabilities of the ST 325 can be used to remove or install just about any type of standard pitch surface mount component when coupled with the ST 500, ST 525, or ST 550.

When additional programming capability is required, such as 4 zone profile creation, an optional software package is available that can be used with a PC or laptop (1199-0019-P1). The optional software package further allows the ST 325 to control the ST 450 Preheater when bottom side heating of the PCB is required. Once the 4 zone profiles have been created with the software, they can be downloaded to the ST 325 and can be run WITHOUT the PC or laptop being connected!

The system can install standard BGA packages when fitted with the ST 500, ST 525 or ST 550, ST 450 or ST 400, and the optional PC or laptop software. Course pitch area array components are aligned using a proven, reliable template method that is easy to use



ST 325



Features

- Multi-level password lock-out prevents unauthorized changes.
- User definable temperature zone.
- Audible countdown timer for end of cycle indication in the Timed and Program modes.
- On-screen display of parameters (temperature, time) during operation.
- Store and recall up to 20 profiles (40 with optional software).
- Quiet-Flo turbine blower offers nearly silent operation.
- Hi-Flo Vacuum Pump for holding component securely.
- Lo-Flo Vacuum Pump for component wand.

Technical Specifications

Specifications	ST 325
Part Number	8007-0432 ST 325E
Dimensions	134mm x 245mm x 254mm
Weight	4.5kgs (9.9lbs)
Input Supply	197-253 VAC, 50/60 Hz,
Power Consumption	575 Watts max.
Temperature Control	Closed loop,
Temperature Stability	± 9°C (±15°F) at idle tip temp.
Temperature Range	149° to 482°C nominal
Airflow Range	5-22 slpm






6 Pcs Hot Air Nozzle Set Model SON-PNS6 for different applications

Hot Air Nozzles	Component type	Dimensions	Part Number
	PLCC28	12.5mm x 12.5mm	4028-2003
	TQFP120	15.5mm x 15.5mm	4028-3004
	PLCC52	20.0mm x 20.0mm	4028-2006
	PLCC68	24.0mm x 24.0mm	4028-2007
	QFP132	27.0mm x 27.0mm	4028-2503
	QFP240	33.0mm x 33.0mm	4028-2506

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Hot Air Nozzles for ST-325

Component	BGA Size (Nominal)	Part Number
 BGA-204/225/256/272/292/320/324	27mm (1.1") H x 27mm (1.1") W	4028-5001
 BGA-169/168	23mm (0.91") H x 23mm (.91") W	4028-5002
BGA-313/352	35mm (1.38") H x 35mm (1.38") W	4028-5003
BGA-144	13mm (0.51") H x 13mm (0.51") W	4028-5004
BGA-121/196	15mm (0.59") H x 15mm (0.59") W	4028-5005
BGA-86	16.25mm (0.64") H x 17.75mm (0.70") W	4028-5006
BGA-68	13.45mm (0.53") H x 14.97mm (0.59") W	4028-5007
BGA-32	10.42mm (0.41") H x 10.42mm (0.41") W	4028-5008
 BGA-40/44	11.97mm (0.47") H x 13.21mm (0.52") W	4028-5009
BGA-18	8.64mm (0.34") H x 8.90mm (0.35") W	4028-5010
BGA-421/432/736	40mm (1.57") H x 40mm (.57") W	4028-5012
BGA-560	42.5mm (1.67") H x 42.5mm (1.67") W	4028-5013
BGA-240/304/432	31mm (1.22") H x 31mm (1.22") W	4028-5014
BGA-256	17mm (0.67") H x 17mm (0.67") W	4028-5015
BGA-252/255/256	21mm (0.83") H x 21mm (0.83") W	4028-5016
BGA (Short Adpt.)	21mm (0.83") H x 21mm (0.83") W	4028-5017
 BGA-479/493/584	37.5mm (1.48") H x 37.5mm (1.48") W	4028-5018
BGA-96/121	19mm (0.75") H x 19mm (0.75") W	4028-5019
BGA-240/324	32mm (1.26") H x 32mm (1.26") W	4028-5020
BGA-256/400	29mm (1.14") H x 29mm (1.14") W	4028-5021
BGA-100	16mm (0.63") H x 16mm (0.63") W	4028-5022
BGA-119	22mm (0.87") H x 14mm (0.55") W	4028-5023
 BGA-169	19.25mm (0.76") H x 19.25mm (0.76") W	4028-5024
BGA-196	18.5mm (0.73") H x 18.5mm (0.73") W	4028-5025
BGA-240	26.4mm (1.04") H x 26.4mm (1.04") W	4028-5026
BGA-256	30mm (1.18") H x 30mm (1.18") W	4028-5027
BGA-475	25mm (0.98") H x 32.3mm (1.27") W	4028-5028
BGA-521	43mm (1.69") H x 43mm (1.69") W	4028-5029
BGA-540	44mm (1.73") H x 44mm (1.73") W	4028-5030
BGA-625	32.5mm (1.28") H x 32.5mm (1.28") W	4028-5031
BGA-169	22mm (0.87") H x 22mm (.87") W	4028-5032
BGA-361	33mm (1.29") H x 33mm (1.29") W	4028-5033
BGA-720	47.5mm (1.87") H x 47.5mm (1.87") W	4028-5034
BGA-303	21mm (0.83") H x 25mm (0.98") W	4028-5035
BGA (Short Adpt.)	17mm (0.67") H x 17mm (0.67") W	4028-5036
BGA (Small Cup)	21mm (0.83") H x 21mm (0.83") W	4028-5037
Micro BGA-48	7.75mm (0.31") H x 5.6mm (0.22") W	4028-5501
Micro BGA-48	7.85mm (0.31") H x 6.40mm (0.25") W	4028-5502
Calibration Nozzle	27mm (1.1") H x 27mm (1.1") W	4028-2010

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Hot Air Nozzles for ST-325

Pattern Nozzles	Component Type	Jet Spacing	Jet Length	Part Number
	SOIC- 8 (JEDEC)	4.1mm (0.16")	6.1mm (0.24")	4028-4001-P1
	SOIC-14/16 (JEDEC)	4.1mm (0.16")	10.9mm (0.43")	4028-4002-P1
	SOICL-16 (JEDEC)	7.9mm (0.31")	10.9mm (0.43")	4028-4003
	SOICL-20 (JEDEC)	7.9mm (0.31")	13.5mm (0.53")	4028-4004
	SOICL-24 (JEDEC)	7.9mm (0.31")	16mm (0.63")	4028-4005
	SOICL-28 (JEDEC)	7.9mm (0.31")	18.5mm (0.73")	4028-4006
	SOICL-32 (JEDEC)	11.68mm (0.46")	20.83mm (0.82")	4028-4007
	TSOP-48 (Type I)	18.6mm (0.734")	13.5mm (0.53")	4028-4505
	TSOP-32/40/44/50 (Type II)	10.4mm (0.41")	21.35mm (0.84")	4028-4506
Single Jet Nozzles	Shape of Jet Tube	Nozzle Size (Nominal)		Part Number
	Curved, Round	3.0mm diameter (0.1" diameter)		4028-1001-P1
	Curved, Round	5.0mm diameter (0.2" diameter)		4028-1002-P1
	Curved, Round	8.0mm diameter (0.3" diameter)		4028-1003-P1
	Straight, Round	3.0mm diameter (0.01" diameter)		4028-1011-P1
	Straight, Round	5.0mm diameter (0.2" diameter)		4028-1012-P1
	Straight, Round	8.0mm diameter (0.3" diameter)		4028-1013-P1
	Flat Jet	13.21mm length (0.52)		4028-1021-P1
	Flat Jet	23.37mm length (0.92)		4028-1022-P1
	Box Nozzles	Component Type	Nozzle Size (Nominal)	
	PLCC	32.5mm (1.28") H x 46.5mm (1.83") W		4028-1501
	PLCC-18 (Non Baffled)	8.5mm (0.34") H x 12.1mm (0.48") W		4028-2001
	PLCC-20 (Non Baffled)	10.2mm (0.40") H x 10.2mm (0.40") W		4028-2002
	PLCC-28 (Non Baffled)	12.8mm (0.50") H x 12.8mm (0.50") W		4028-2003
	PLCC-32 (Non Baffled)	12.8mm (0.50") H x 15.3mm (0.60") W		4028-2004
	PLCC-44 (Non Baffled)	17.9mm (0.70") H x 17.9mm (0.70") W		4028-2005
	PLCC-52	20.4mm (0.80") H x 20.4mm (0.80") W		4028-2006
	PLCC-68	25.5mm (1.01") H x 25.5mm (1.01") W		4028-2007
	PLCC-84	30.6mm (1.20") H x 30.6mm (1.20") W		4028-2008
	PLCC-100	38.9mm (1.53") H x 38.9mm (1.53") W		4028-2009
	QFP-80/100	18.1mm (0.71") H x 24.1mm (0.95") W		4028-2501
	QFP-64/80 (Non Baffled)	17.0mm (0.67") H x 17.0mm (0.67") W		4028-2502
	QFP-132	26.9mm (1.06") H x 26.9mm (1.06") W		4028-2503
	QFP-160	31.9mm (1.26") H x 31.9mm (1.26") W		4028-2504
	QFP-208	31.5mm (1.24") H x 31.5mm (1.24") W		4028-2505
	QFP-240	34.6mm (1.36") H x 34.6mm (1.36") W		4028-2506
	BQFP-100	23.5mm (0.925") H x 23.5mm (0.925") W		4028-2507
	BQFP-84	20.9mm (0.8") H x 20.9mm (0.8") W		4028-2508
	BQFP-132	27.1mm (1.07") H x 27.1mm (1.07") W		4028-2602
	TQFP-32 (Non Baffled)	11.5mm (0.453") H x 11.5mm (0.453") W		4028-3002
	TQFP-120 (Non Baffled)	15.5mm (0.610") H x 15.5mm (0.610") W		4028-3004
	TQFP-48	18.6mm (0.734") H x 18.6mm (0.734") W		4028-4505

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