

K & S 780 Dicing Saw

Technical Specification Sheet Standard Features

CUTTING AXIS (X)

Drive	DC Servo, lead screw, air bearing	
Travel	11.5" +/- 0.050" (292.1 mm +/- 1.25 mm)	
Minimum Speed	0.0001"/sec (0.018 mm/sec)	DS014
Maximum Speed	15.62"/sec (396.75) mm/sec	
Resolution	0.00015" (4 Micron)	

INDEX AXIS (Y)

Drive	Micro-stepper, lead screw, air bearing
Travel	6.3" +/- 0.0050" (160.1 mm +/- 1.27 mm)
Resolution	0.000032" (0.80 micron)
Positioning accuracy	+/- 0.0001 (+/- 2.5 micron)

VERTICAL AXIS (Z)

Drive	Micro-stepper, lead screw
Travel	1" +/- 0.050" (25.4 mm +/- 1.25 mm)
Resolution	0.000032" (0.080 micron)

OPTICS

Targeting System	Electronic crosshair
Monitor	9" black & white

Illumination	256 programmable levels, 2800 Lux maximum
Optical magnification	x5
Resolution	0.0002" between two video lines

ROTARY AXIS (THETA)

Drive	Micro-stepper
Speed	90 deg. / 2.5 sec
Rotation range	0 deg. to 170 deg.
Resolution	4 arc seconds
Repeatability	+/- 6 arc seconds
Chuck flatness	0.0004" (10 microns) over 6"

SPINDLE **4" / 2"**

Motor	Air bearing, water cooled
Minimum speed	4,000 rpm
Maximum speed	30,000 rpm / 40,000 rpm
Maximum output power	1,700 Watts / 1,400 Watts
Speed control	Continuous increments of 100 rpm/140 rpm

UTILITIES

AIR

Pressure	<u>80 psi</u> (5.4 atm) for machine type 784-6, 784-10 & 784-14 <u>65-70 psi</u> (4.6 – 4.9 atm, for machine types 782-6 & 782-10)
Pressure tolerance	+/-5%
Dew point	10 degrees C at 6.8 atm (50 deg. F, 120 PSI)

Oil mist removal	99.9% minimum
Filtration level	0.3 micron maximum
Flow rate	10 scfm

CUTTING WATER

Type	DI or Tap Water
Particle size	25 micron maximum
Pressure	40 psi (2.7 atm – 100 psi (6.7 atm)
Flow rate	40 US gal/h (150 liter/h) maximum
Temperature	Room temperature +/- 1 deg. C

SPINDLE WATER

Type	DI or tap water
Particle size	25 micron maximum
Pressure	40 psi (2.7 atm) – 100 psi (6.7 atm)
Flow rate	16 US gal/h (57 liter/h) maximum
Temperature	Room temperature +/- 1 deg. C

VACUUM

Flow rate	10.5 scfm (300 liter/h) minimum
Vacuum level	610 mm Hg

ELECTRICAL

Voltage	200V – 240V (-15%, +/- 10%)
Line requirements	1 phase, 50 or 60 Hz (+/- 3 Hz)
Power requirement	3,000 Watts
Load Current	15A

PHYSICAL DIMENSIONS

Travel	6" & 14" Travel
Height	59" (1500 mm) / 63" (1600 mm)
Depth	47" (1200 mm) / 55" (1400 mm)
Width	33.5 (850 mm) / 43" (1100 mm)
Weight	990 lb (450 kg) / 1100 lb (500 kg)