



# MULTIZONE HEATER SYSTEM FOR SELECTIVE LASER SINTERING

Retrofit for LS 2500 - LS 2500 Plus / Vanguard Systems

## CURRENT HEATER

- ONLY TWO ZONES - INNER AND OUTER
- HAND LAID HEATERS RESULTS IN HOT AND COLD SPOTS
- RESULTS IN HOT AND COLD SPOTS IN THE BUILD
- NO WAY TO ADD HEAT TO PARTICULAR AREAS
- MECHANICAL PROPERTIES VARY IN BUILD VOLUME

Jointly developed by  
The Boeing Company,  
University of Louisville Rapid  
Prototyping Center & Integra

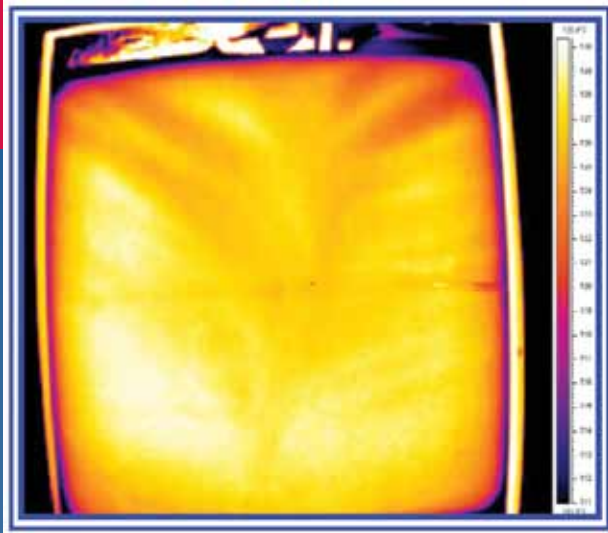
## NEW MULTIZONE HEATER

- INDIVIDUALLY CONTROLLED ZONES
- AVAILABLE FOR PART AND FEED HEATERS
- 9 ZONES: FRONT/REAR • LEFT/RIGHT • CENTER • ALL FOUR CORNERS
- 9 ZONE SOFTWARE CONTROLLED
- TUNABLE SYSTEM TO OPTIMIZE THERMAL PROFILE IN THE MACHINE
- CONSISTANT MECHANICAL PROPERTIES ACROSS THE PART BED
- RETROFIT FOR CURRENT HEATER CONFIGURATIONS

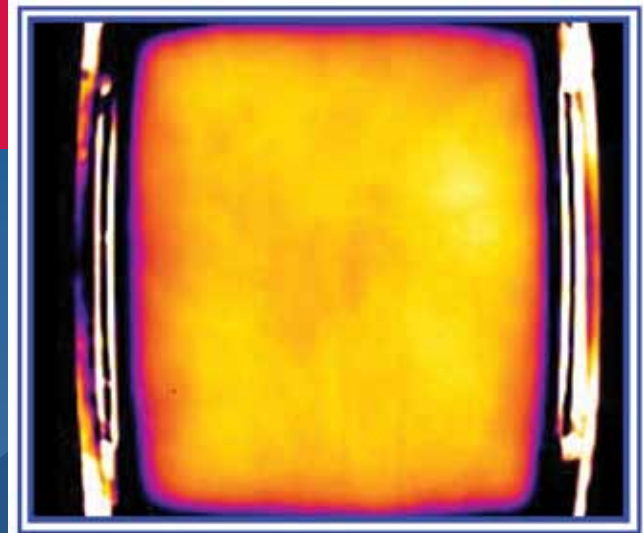
**AVAILABLE EXCLUSIVELY FROM INTEGRA**



# HEATER LAYOUT VIEWS



Current Heater IR Profile I/O = 0.7



MultiZone Heater



MultiZone Heater



MultiZone Heater

## DURAFORM YZ 12W WITH 5W OUTLINE

	Thickness (In)	Width (n)	Area (ia^2)	Load .2% off Yield 1 (psi)	Stress .2% off Yield 1 (psi)	Load at Max. Load (ibf)	Stress at Max. Load (psi)	% Strain at Auto Break (%)	1K-3K Modulus (Man Young) (psi)
1	0.118	0.491	5.79E-02	199.868	3449.68	410.951	7092.94	20.7874	320655
2	0.117	0.492	5.76E-02	224.612	3901.96	404.656	7029.67	21.2205	297550
3	0.117	0.493	5.77E-02	195.662	3392.14	402.183	6972.54	20.0984	331198
4	0.117	0.492	5.76E-02	226.403	3933.06	406.679	7064.82	22.9724	306466
Mean	0.011725	0.492	5.77E-02	211.636	3669.21	406.117	7039.99	21.2697	313967
Standard Deviation	5.00E-04	8.16E-04	1.76E-04	16.1266	287.953	3.70992	51.8843	1.22559	14915.4