AccuShaper®

Trepanning Head

Laser Mechanisms' AccuShaper® Trepanning Head delivers fully programmable X-Y-Z motion control for laser cutting/welding applications. With a working envelope of 50 mm in X-Y-Z (expandable), AccuShaper easily adapts to the contours of your process.

The AccuShaper Trepanning Head delivers optimal performance when configured as a fixed, stand-alone unit with a moving part. With interchangeable motors and ball screws, AccuShaper's operation can be custom engineered to your laser application.

Features

- Easily adapts to either CO_2, YAG or Fiber Lasers
- High-speed z-axis delivers fast, consistent performance and reduced cycle times
- Sealed beam path keeps optics debris free
- Mates to a variety of processing heads
- Engineered for the harsh factory floor environment

Specifications

Clear Aperture	48 mm
Travel (X-Y-Z axes)	50 mm
Speed X-axis	75 mm/sec
Y-axis	75 mm/sec
Z-axis	400 mm/sec
Positional Accuracy	± .025 mm
Repeatability	± .01 mm
Weight	25 kg

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Customer Interface Connections

P1 – AC INPUT

85-264VAC, 50/60Hz, 15A

P2 – Customer Interface

PIN	I/O	NAME	DESCRIPTION
P1-1	O	OUTPUT POWER	CUSTOMER SUPPLIED 5 - 28 VDC
P1-2	O	TIP TOUCH	MATERIAL COLLISION 1=CONTACT 0=NOT ACTIVE
P1-3	O	CABLE OKAY	HSU CABLE BREAK SIGNAL 1=OKAY
P1-4	O	CAL POINT CONFIRM	HSU CALIBRATION STATUS
P1-5	O	EDGE	HEIGHT WITHIN 4MM OF MATERIAL 1=IN RANGE
P1-6	O	HSU OKAY	HEIGHT SENSOR STATUS 1=OKAY
P1-7	O	HOLD OUT	HSU IN HOLD
P1-8	O	HOME	ALL AXIS @ HOME
P1-9	O	HSU ACTIVE	PROCESSING STATUS
P1-10	O	CYCLE COMPLETE	PROGRAM STATUS
P1-11	O	RESET	RESET STATUS
P1-12	O	AT COT	CONFIRMATION OF Z MID POSITION
P1-13	O	SPARE 1	SPARE OUTPUT
P1-14	O	SPARE 2	SPARE OUTPUT
P1-15	O	SPARE 3	SPARE OUTPUT
P1-16	O	SPARE 4	SPARE OUTPUT
P1-17	O	SPARE 5	SPARE OUTPUT
P1-18		RESERVED	
P1-19	O	OUTPUT RETURN	CUSTOMER SUPPLIED COMMON
P1-20	I	IN COM	INPUT COMMON
P1-21	I	HOLD	HEIGHT SENSOR HOLD INPUT
P1-22	I	HS/COT	CENTER OF TRAVEL INPUT
P1-23	I	LSO	LIMIT SWITCH RELEASE
P1-24	I	HOME	HOME ALL AXIS
P1-25	I	AUTOCAL	CALIBRATE HEIGHT SENSOR
P1-26	I	START	START PROGRAM
P1-27	I	SPARE 1	SPARE INPUT
P1-28	I	RESET	RESET INPUT
P1-29	I	PG1	PROGRAM SELECT BIT 1
P1-30	I	PG2	PROGRAM SELECT BIT 2
P1-31	I	PG3	PROGRAM SELECT BIT 3
P1-32	I	HS1	HEIGHT SELECT BIT 1
P1-33	I	HS2	HEIGHT SELECT BIT 2
P1-34	I	HS3	HEIGHT SELECT BIT 3
P1-35	I	SA	SERVICE ROUTINE
P1-36	I	SB	SERVICE ROUTINE
P1-37		RESERVED	

Digital Inputs:

5 to 28VDC, 1mA min.
The inputs are configurable to be connected to either sinking or sourcing outputs depending on the connection made to the input common. The digital height select bits activate 7 standoff heights.

Digital Outputs:

5 to 28VDC, 25mA per output
All outputs are configured sourcing.

P3 – ETHERNET (RJ-45)

For advanced control and monitor capabilities.