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TECHNOLOGY GROUP

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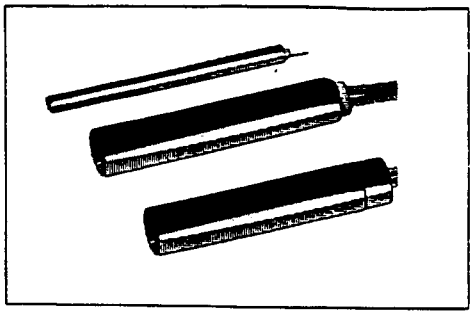
Expert team | Trust guarantee | 100% satisfaction

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Find the *OMEGA CSH-202150/120V* at our website: ***Click HERE***

OMEGALUX®
An OMEGA Technologies Company

CSH/CSS Series Cartridge Heaters



INSTRUCTION SHEET

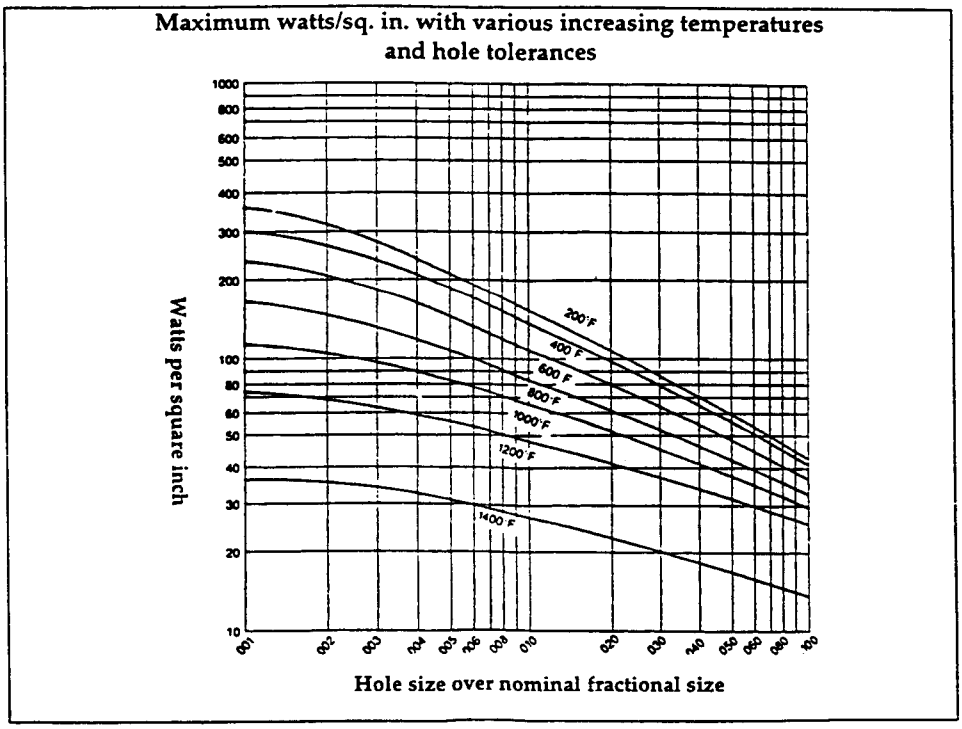
M2180/0395

Installation

Drill and ream holes to the proper length and the nominal diameter plus .001" maximum, minus .000" of the heater diameter 3/16", 3/8", 1/2", 5/8", etc. The heaters are sized so that they never exceed .005 less than the nominal diameter and always at least .001 under the nominal diameter for a slide fit. These close fits insure rapid heat transfer from the heater and also help keep the unit as cool as possible, which contributes to long life. Always finish-ream drilled or cast holes to insure a smooth, uniform metal to metal contact. A knockout hole should be provided if possible to aid removal. The receptacle hole should be free from oil before heater installation to avoid contamination and short life. Do not use set screws to hold heaters in place. Lead wires, especially when the heater is in a moving die or platen, should be supported to prevent excessive stress on the lead wires.

On many applications, plastic material, machine oil, and/or moisture may be present. Cycling of a cartridge heater causes these materials to be absorbed. Heaters, therefore, should be carefully selected for these applications utilizing sealed terminations.

When installing high watt density cartridge heaters (CSH Series), see the graph below for allowable watt densities at different fit tolerances and operating temperatures.



The watt densities are based on a unit installed in mild steel. Different materials affect the above values, i.e. the lower the thermal conductivity of the material, the lower the maximum allowable watts per square inch.

NLR0395JJF1B

16FS-0019

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Specifications

Lead Length:	6" long (152 mm)
Lead Insulation:	
Heater diameter of 1/4" (6.4 mm) and smaller:	Teflon, rated to 200°C (392°F)
Heater diameter of 5/16" (7.9mm) and larger:	Fiberglass, rated to 250°C (482°F)
Wattage Tolerance:	+5% to -10% at rated voltage
Diameter Tolerance:	From 0.001" to 0.005" less than the nominal diameter
Length Tolerance:	±2% or ±1/16" (1.6 mm), whichever is greater
Camber Tolerance:	0.020" per foot length (1.7 mm/m) for units up to 12" (305 mm) long
Sheath Material:	300 series stainless steel

MADE IN USA

WARRANTY

OMEGA warrants this unit to be free of defects in materials and workmanship and to give satisfactory service for a period of **13 months** from date of purchase. OMEGA Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product. If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. However, this WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear or which are damaged by misuse are not warranted. These include contact points, fuses, and triacs.

OMEGA is glad to offer suggestions on the use of its various products. Nevertheless, OMEGA only warrants that the parts manufactured by it will be as specified and free of defects.

OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED.

LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

Every precaution for accuracy has been taken in the preparation of this manual; however, OMEGA ENGINEERING, INC. neither assumes responsibility for any omissions or errors that may appear nor assumes liability for any damages that result from the use of the products in accordance with the information contained in the manual.

SPECIAL CONDITION: Should this equipment be used in or with any nuclear installation or activity, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the equipment in such a manner.

OMEGA

Servicing USA and Canada: Call OMEGA Toll Free

USA	Canada
One Omega Drive, Box 4047	976 Bergar
Stamford, CT 06907-0047	Laval (Quebec) H7L 5A1
Telephone: (203) 359-1660	Telephone: (514) 856-6928
FAX: (203) 359-7700	FAX: (514) 856-6886

Sales Service: 1-800-826-6342 / 1-800-TC-OMEGA℠
Customer Service: 1-800-622-2378 / 1-800-622-BEST℠
Engineering Service: 1-800-872-9436 / 1-800-USA-WHEN℠
TELEX: 996404 EASYLINK: 62968934 CABLE: OMEGA

Servicing Europe: United Kingdom Sales and Distribution Center

25 Swannington Road, Broughton Astley, Leicestershire
LE9 6TU, England
Telephone: 44 (1455) 285520 FAX: 44 (1455) 283912

RETURN REQUESTS / INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA ENGINEERING Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS OR **CALIBRATION**, consult OMEGA for current repair/calibration charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair/calibration,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.
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