

K420XX POWERTROL HEATER

OPERATION AND INSTRUCTION MANUAL

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Koehler Instrument Company, Inc.

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Petroleum Testing & Analysis Instrumentation • Custom Design & Manufacturing



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1 Introduction

This manual provides important information regarding safety, technical reference, installation requirements, operating condition specifications, user facility resource requirements, and operating instructions for the Koehler Powertrol Heater. This manual should also be used in conjunction with applicable published laboratory procedures. Information on these procedures is given in section 1.2.

1.1 Koehler's Commitment to Our Customers

Providing quality testing instrumentation and technical support services for research and testing laboratories has been our specialty for more than 50 years. At Koehler, the primary focus of our business is providing you with the full support of your laboratory testing needs. Our products are backed by our staff of technically knowledgeable. trained specialists who are experienced in both petroleum products testing and instrument service to better understand your requirements and provide you with the best solutions. You can depend on Koehler for a full range of accurate and reliable instrumentation as well as support for your laboratory testing programs. Please do not hesitate to contact us at any time with your inquiries about equipment, tests, or technical support.

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1.2 Recommended Resources and Publications

 American Society for Testing and Materials (ASTM)

100 Barr Harbor Drive

West Conshohocken, Pennsylvania 19428-

2959. USA

Tel: +1 610 832 9500 Fax: +1 610 832 9555 http://www.astm.org email: service@astm.org

1.3 Instrument Specifications

Model No	Voltage	Power	Frequency
K42000	115V	1000W	60 Hz
K42001	115V	1250W	60 Hz
K42090	230V	1000W	50/60 Hz
K42091	230V	1250W	50/60 Hz

Dimensions

(lxwxh,in.(cm)): $5 \times 5 \times 10$

(12.7 x 12.7 x 25.4)

Net Weight: 4.5 lbs (2.0 kg)

Shipping Weight: 8 lbs (3.6kg)

Shipping Dimensions: 1.5 Cu.ft

2 Safety Information and Warnings

Safety Considerations. The use of this equipment may involve *hazardous* materials and operations. This manual does not purport to address all of the safety problems associated with the use of this equipment. It is the responsibility of any user of this equipment to investigate, research, and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

Equipment Modifications and Replacement Parts. Any modification or alteration of this equipment from that of factory specifications is NOT recommended because it voids the manufacturer warranty, product safety, performance specifications, and/or certifications whether specified or implied, and may result in personal injury and/or property loss. Replacement parts must be O.E.M. exact replacement equipment.



3 Operation

- **1.** Plug heater into receptacle of the proper electrical characteristics (115V or 230V).
- 2. Turn unit on by turning knob (On/Off Switch) clockwise.
- Vary heat by turning knob clockwise from 0 to full.
- **4.** To energize receptacle for stirrer or an accessory, depress the front panel switch to ON.

4 Service

Under normal operating conditions and with routine maintenance, the Powertrol Heater does not require service. Any service problem can be quickly resolved by contacting Koehler's technical service department either by letter, phone, fax, or email. In order to assure the fastest possible service, please provide us with the following information.

Model Number:	
Serial Number:	
Date of Shipment:	

5 Storage

This laboratory test instrument is equipped with electrical components. Storage facilities should be consistent with an indoor laboratory environment. This testing equipment should not be subjected to extremes of temperature and/or moisture. This equipment was shipped from the factory in a corrugated cardboard container. If long term storage is anticipated, re-packing the instrument in a water-resistant container is recommended to ensure equipment safety and longevity.

6 Warranty

We, at Koehler, would like to thank you for your equipment purchase, which is protected by the following warranty. If within one (1) year from the date of receipt, but no longer than fifteen (15) months from the date of shipment, Koehler equipment fails to perform properly because of

defects in materials or workmanship, Koehler Instrument Company, Inc. will repair or, at its sole discretion, replace the equipment without charge F.O.B. its plant, provided the equipment has been properly installed, operated, and maintained. Koehler Instrument Company must be advised in writing of the malfunction and authorize the return of the product to the factory. The sole responsibility of Koehler Instrument Company and the purchaser's exclusive remedy for any claim arising out of the purchase of any product is the repair or replacement of the product. In no event shall the cost of the purchaser's remedy exceed the purchase price, nor shall Koehler Instrument Company be liable for any special, indirect, incidental, consequential, or exemplary damages. KOEHLER INSTRUMENT COMPANY. INC. **DISCLAIMS** ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. Please save the shipping carton in the event the equipment needs to be returned to the factory for warranty repair. If the carton is discarded, it will be the purchaser's responsibility to provide an appropriate shipping carton.

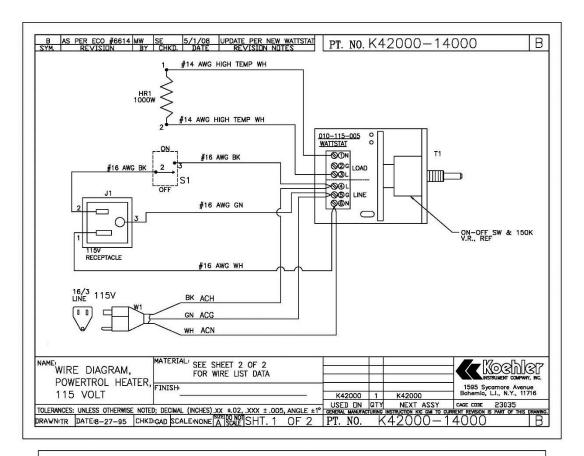
7 Returned Goods Policy

To return products for credit or replacement, please contact Koehler Customer Service with your purchase order number, our packing list/invoice number, the item(s) to be returned and the reason for the return. You will be issued a Returned Authorization (RA) number, which must be prominently displayed on the shipping container when you return the material to our plant. Shipping containers without an RA number prominently displayed will be returned to the sender. Goods must be returned freight prepaid. Returns will be subject to a restocking charge, the application of which will depend upon the circumstances necessitating the return. Some returns cannot be authorized, including certain products purchased from outside vendors for the convenience of the customer, products manufactured on special order, products shipped from the factory past ninety (90) days, and products which have been used or modified in such a way that they cannot be returned to stock for future sale.



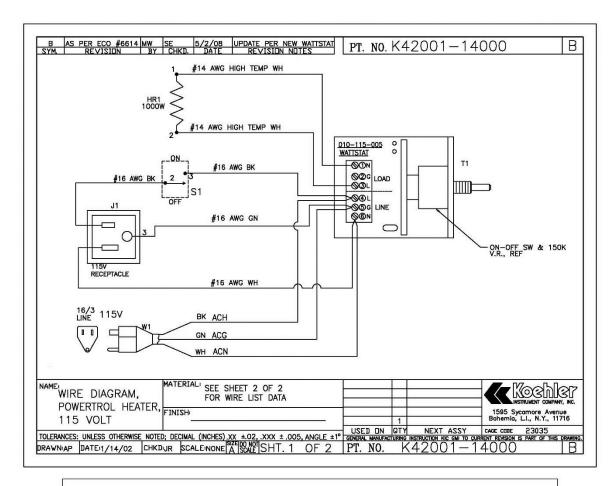
8 Wiring Diagrams





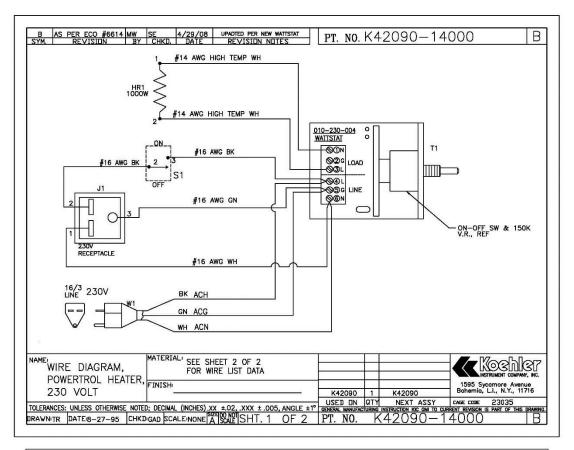
	WIRE DAT	'A			TERMINAT	A	SIGNAL NAME,		
NO.	TYPE	COLOR	LENGTH	POINT 1	TYPE	POINT 2	TYPE	COMMEN	
001	282-016-016	BK	72.0	W1	MOLDED PLUG	T1-4	284-116-10E	ACI	H
001	282-016-016	WH	72.0	W1	MOLDED PLUG	T1-6	284-116-10E	ACI	N
001	282-016-016	GN	72.0	W1	MOLDED PLUG	T1-5	284-116-10E	AC	3
002	282-016-B02	BK	6.0	J1-2	284-516-061	S1-2	284-216-25E		
003	282-016-W02	WH	6.0	J1-1	284-516-061	T1-6	284-116-10E		
004	282-016-G02	GN	6.0	J1-3	284-516-061	T1-5	284-116-10E		
005	282-016-B02	BK	6.0	S1-3	284-216-25E	T1-4	284-116-10E		
006	282-014-W18	WH	11.0	HR1-1	284-116-10H	T1-1	284-116-10E	HEATE	R L1
007	282-014-W18	WH	11.0	HR1-2	284-116-10H	T1-3	284-116-10E	HEATER	₹ L2
Sec. 27 - 26	E LIST:POWE	RTRO	L HEA	ER, 115	VOLT		DRAWING K42000	NUMBER -14000	REVISION B





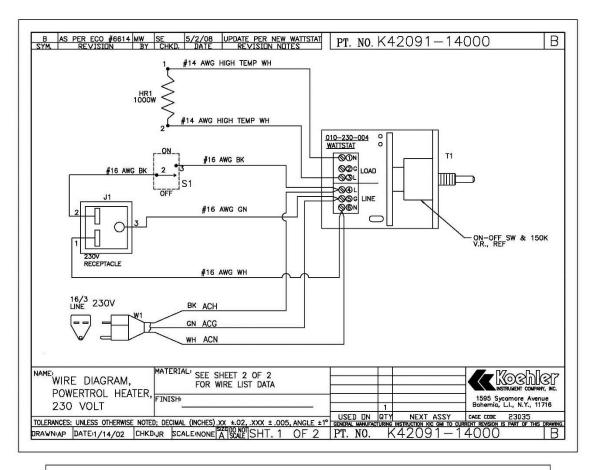
	WIRE DAT	'A			TERMINAT	SIGNAL NAME,			
NO.	TYPE	COLOR	LENGTH	POINT 1	TYPE	POINT 2	TYPE	COMME	
001	282-014-016	BK	72.0	W1	MOLDED PLUG	T1-4	284-116-10E	AC	:H
001	282-014-016	WH	72.0	W1	MOLDED PLUG	T1-6	284-116-10E	AC	N
001	282-014-016	GN	72.0	W1	MOLDED PLUG	T1-5	284-116-10E	AC	:G
002	282-016-B02	BK	6.0	J1-2	284-516-06	S1-2	284-216-25E	10	
003	282-016-W02	WH	6.0	J1-1	284-516-06	T1-6	284-116-10E		
004	282-016-G02	GN	6.0	J1-3	284-516-06	T1-5	284-116-10E		
005	282-016-B02	BK	6.0	S1-3	284-216-25E	T1-4	284-116-10E		
006	282-014-W18	WH	11.0	HR1-1	284-116-10H	T1-1	284-116-10E	HEATE	R L1
007	282-014-W18	WH	11.0	HR1-2	284-116-10H	T1-3	284-116-10E	HEATE	R L2
WIR:	E LIST:POWE	RTRO	L HEAT	TER, 115	VOLT		DRAWING	NUMBER	REVISION
SHEE	ET 2 OF 2						K42001	-14000	В





	WIRE DAT	'A	71111111111111111111111111111111111111		TERMINAT	SIGNAL NAME,			
NO.	TYPE	COLOR	LENGTH	POINT 1	TYPE	POINT 2	TYPE	COMMENTS	
001	282-016-017	BK	72.0	W1	MOLDED PLUG	T1-4	284-116-10E	AC	L1
001	282-016-017	WH	72.0	W1	MOLDED PLUG	T1-6	284-116-10E	AC	L2
001	282-016-017	GN	72.0	W1	MOLDED PLUG	T1-5	284-116-10E	GRO	UND
002	282-016-B02	BK	6.0	J1-2	284-516-06	S1-2	284-216-25E		
003	282-016-W02	WH	6.0	J1-1	284-516-06	T1-6	284-116-10E		
004	282-016-G02	GN	6.0	J1-3	284-516-06	T1-5	284-116-10E		
005	282-016-B02	BK	6.0	S1-3	284-216-25E	T1-4	284-116-10E		
006	282-014-W18	WH	11.0	HR1-1	284-116-10H	T1-1	284-116-10E	HEATE	R L1
007	282-014-W18	WH	11.0	HR1-2	284-116-10H	T1-3	284-116-10E	HEATE	R L2
WIR	E LIST:POWE	RTRO	L HEA	TER, 230	VOLT		DRAWING	NUMBER	REVISION
SHEE	ET 2 OF 2						K42090	-14000	В





	WIRE DAT	'A	X		TERMINAT	SIGNAL NAME.		
NO.	TYPE	COLOR	LENGTH	POINT 1	TYPE	POINT 2	TYPE	COMMENTS
001	282-014-017	BK	72.0	W1	MOLDED PLUG	T1-4	284-116-10E	ACL1
001	282-014-017	WH	72.0	W1	MOLDED PLUG	T1-6	284-116-10E	ACL2
001	282-014-017	GN	72.0	W1	MOLDED PLUG	T1-5	284-116-10E	GROUND
002	282-016-B02	BK	6.0	J1-2	284-516-061	S1-2	284-216-25E	
003	282-016-W02	WH	6.0	J1-1	284-516-061	T1-6	284-116-10E	
004	282-016-G02	GN	6.0	J1-3	284-516-061	T1-5	284-116-10E	
005	282-016-B02	BK	6.0	S1-3	284-216-25E	T1-4	284-116-10E	
006	282-014-W18	WH	11.0	HR1-1	284-116-10H	T1-1	284-116-10E	HEATER L1
007	282-014-W18	WH	11.0	HR1-2	284-116-10H	T1-3	284-116-10E	HEATER L2
WIR	E LIST:POWE	RTRO	L HEAT	ΓER, 230	VOLT		DRAWING	NUMBER REVISIO



9	Notes
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10 Notes

INSTRUMENT COMPANY, INC.	K420XX Powertrol Heater Operation and Instruction Manual
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