

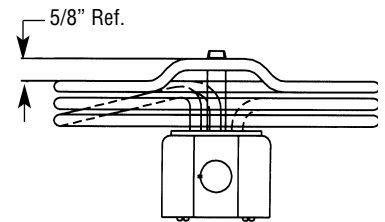
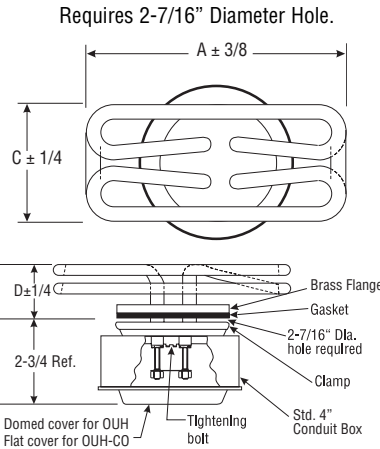


Installation, Operation and MAINTENANCE INSTRUCTIONS

SERVICE REFERENCE

DIVISION 4	SECTION OUH
SALES REFERENCE (Supersedes OMC Man. 45) PD400-OMC45	
161-305399-004	
DATE MARCH, 2006	

Ogden Bottom Mounted Immersion Heaters (OUH)



Note: All models with low liquid level cut-out. Add 5/8" to "D" Dimension.

Specifications – OUH

Catalog #	Watts	Volts	Phase	Number of Elements	Element Dia.	A	C	D*
OUH-10A2	1,000	120	1	2				
OUH-10D2	1,000	208	1	2	.312	7	3-1/8	1-1/4
OUH-10B2	1,000	240	1	2				
OUH-15A2	1,500	120	1	2				
OUH-15D2	1,500	208	1	2	.312	7	3-1/8	1-1/4
OUH-15B2	1,500	240	1	2				
OUH-20A2	2,000	120	1	2				
OUH-20D2	2,000	208	1	2	.312	7	3-1/8	1-1/4
OUH-20B2	2,000	240	1	2				
OUH-25A2	2,500	120	1	2				
OUH-25D2	2,500	208	1	2	.312	7	3-1/8	1-1/4
OUH-25B2	2,500	240	1	2				
OUH-30A2	3,000	120	1	2				
OUH-30D2	3,000	208	1	2	.312	9	3-1/8	1-1/4
OUH-30B2	3,000	240	1	2				
OUH-40D2	4,000	208	1	2				
OUH-40B2	4,000	240	1	2	.312	11	3-1/8	1-1/4
OUH-50D2	5,000	208	1	2				
OUH-50B2	5,000	240	1	2	.312	9	4-1/8	1-1/2
OUH-60D2	6,000	208	1	2				
OUH-60B2	6,000	240	1	2	.312	13	4-1/8	1-1/2
OUH-70D2	7,000	208	1	2				
OUH-70B2	7,000	240	1	2	.312	13	4-1/8	1-1/2
OUH-30G3	3,000	208	3	3				
OUH-30E3	3,000	240	3	3	.312	9	3-1/8	2-1/8
OUH-40G3	4,000	208	3	3				
OUH-40E3	4,000	240	3	3	.312	9	3-1/8	2-1/8
OUH-50G3	5,000	208	3	3				
OUH-50E3	5,000	240	3	3	.312	9	3-1/8	2-1/8
OUH-60G3	6,000	208	3	3				
OUH-60E3	6,000	240	3	3	.312	9	4-1/8	2-1/8
OUH-70G3	7,000	208	3	3				
OUH-70E3	7,000	240	3	3	.312	9	4-1/8	2-1/8
OUH-70F3	7,000	480	3	3				
OUH-80G3	8,000	208	3	3				
OUH-80E3	8,000	240	3	3	.312	13	4-1/8	2-1/8
OUH-80F3	8,000	480	3	3				
OUH-90G3	9,000	208	3	3				
OUH-90E3	9,000	240	3	3	.312	13	4-1/8	2-1/8
OUH-90F3	9,000	480	3	3				
OUH-100G3	10,000	208	3	3				
OUH-100E3	10,000	240	3	3	.312	13	4-1/8	2-1/8
OUH-100F3	10,000	480	3	3				

* Minimum liquid level should be maintained 1/2" above "D" dimension.

GENERAL

⚠ WARNING

FIRE/EXPLOSION HAZARD. This heater is not intended for use in hazardous atmospheres where flammable vapors, gases, liquids or other combustible atmospheres are present as defined in the National Electrical Code. Failure to comply can result in personal injury or property damage.

Ogden OUH and OUH-CO food equipment heaters are ideal for coffee urns, steam tables, kettles, sterilizers, humidifiers and other commercial uses.

Heater Construction Characteristics

- A. An opening of 2-7/16" in diameter in the bottom of the tank is required to insert the heater.
- B. High watt density.
- C. 4" conduit box is mounted to the tank by a tightening bolt.

⚠ WARNING

The system designer is responsible for the safety of this equipment and should install adequate back-up controls and safety devices with their electric heating equipment. Where the consequences of failure could result in personal injury or property damage, back-up controls are essential.

INSTALLATION

⚠ WARNING

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater. Failure to do so could result in personal injury or property damage. Heater must be installed by a qualified person in accordance with the National Electrical Code, NFPA 70.

⚠ WARNING

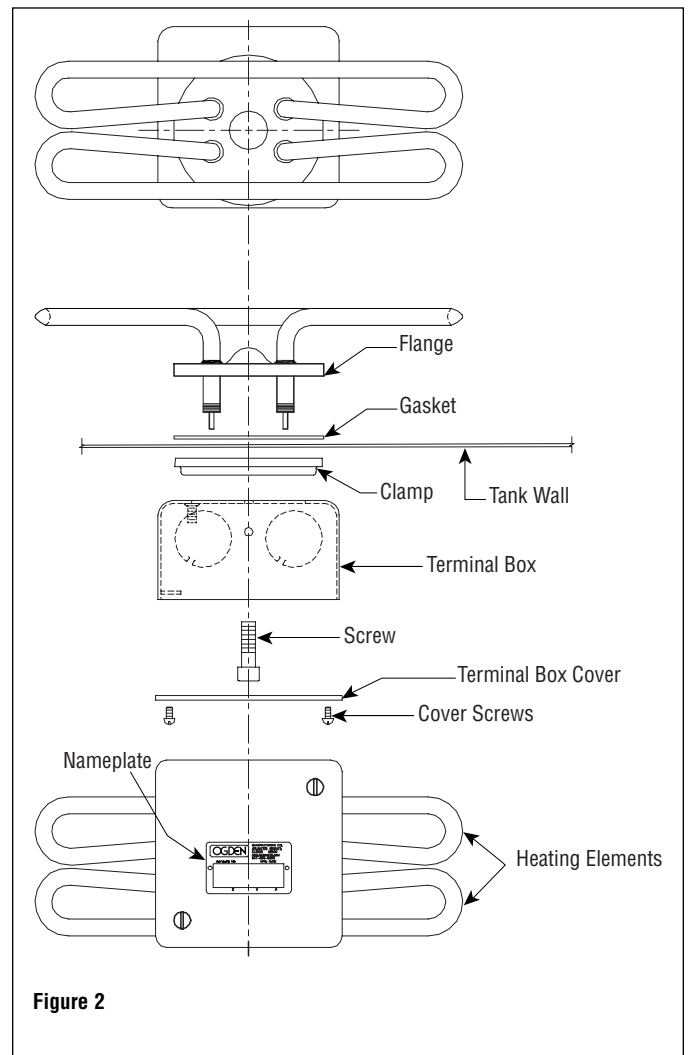
FIRE HAZARD. Since heaters are capable of developing high temperatures, extreme care should be taken to:

- A. Avoid mounting heaters in an atmosphere containing combustible gases and vapors.
- B. Avoid contact between heaters and combustible materials.
- C. Keep combustible materials far enough away to be free of the effects of high temperature.
- D. Keep heater immersed at all times.

INSTALLATION – OUH

Note: Mount heater in horizontal position.

1. Cut a hole 2-7/16" in diameter in bottom of tank unless already done.
2. Insert heater with gasket. (Use sealer if tank wall is corroded.)
3. Mount the combination terminal enclosure and clamp over the element flange. (On 3 phase, first remove center jumper strap.)
4. Use bolt to draw mounting flange tight to tank bottom. (Reconnect jumper strap on 3 phase.)
5. For connecting heaters, see wiring diagrams.
6. 120V elements can be connected in series for high voltage operation.



INSTALLATION – OUH-CO

1. Remove cover.
2. Loosen set screw with 5/64" balldriver L-wrench. (Allen wrench).
3. Remove thermal cutout by pulling directly out.
4. Remove enclosure flange assembly by removing 5/16" socket head cap screw in center.
5. Insert element and gasket in tank opening (use sealer if tank wall is corroded).
6. Replace enclosure flange assembly and the 5/16" socket head cap screw.
7. Push cutout into place. Be sure the thermal cutout is properly located and seated on the conductor rod. (See Figures 3 & 4).
8. Secure cutout to the conductor rod with set screw. (See Fig. 3).

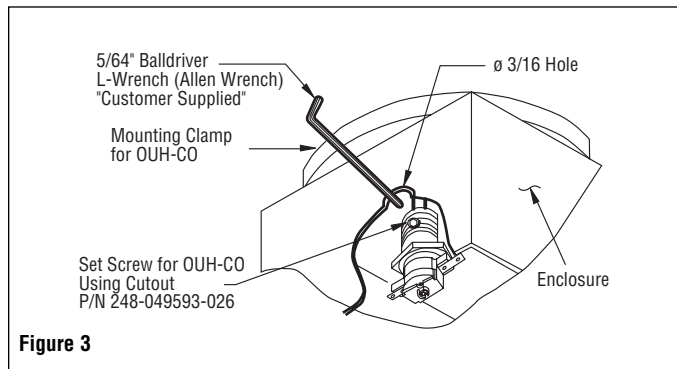


Figure 3

9. Make sure fully insulated 1/4" female spade connectors are used when connecting to the thermal cutout.
10. On all single phase units less than 3kW – attach power leads to T1 & T2 (see Figure 4) and connect cutout lead to one terminal on the cutout. **Note:** Single phase heaters 3kW and above and all three phase models require the use of a suitable magnetic contactor. (Supplied by customer).

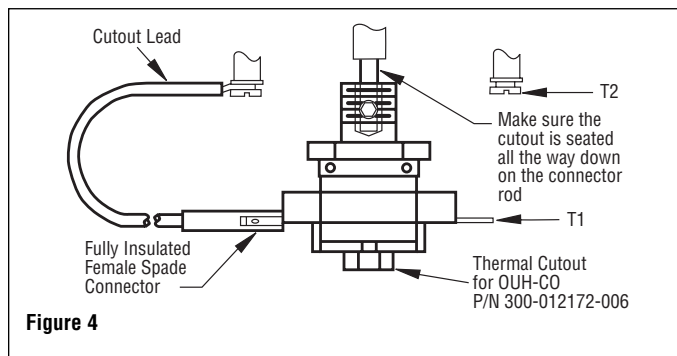


Figure 4

11. On all OUH-CO Three Phase Delta Units – Twist 1L3 & 2L3 leads together to create L3, then, attach power leads to L1, L2 & L3. Connect cutout to relay or contactor coil. (See Figs. 5 & 11)

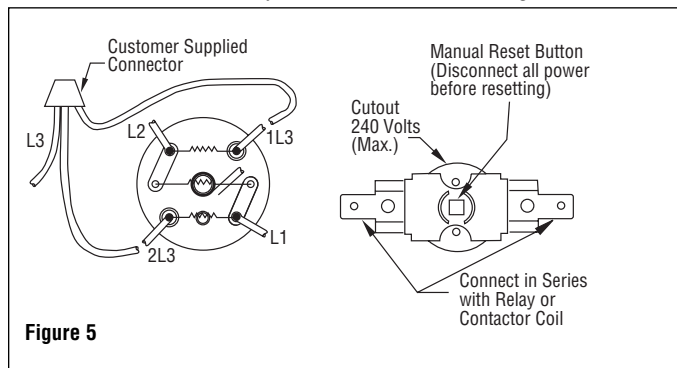


Figure 5

12. Replace cover with the "push to reset" hole directly over the cutout.
13. Refer to the main portion of the instruction, operation and maintenance instructions for all other information.
14. The thermal cutout on the OUH-CO provides run dry burn-out protection only. Partial immersion of the elements while energized can shorten element life. The cutout is a safety device only & should not be used continuously as a low-liquid-level control.
15. Should the thermal cutout trip during operation, disconnect all power to the heater before resetting.
16. Apply manual reset locator label (see fig. 6) in view, to help locate the manual reset button. See Fig 7.

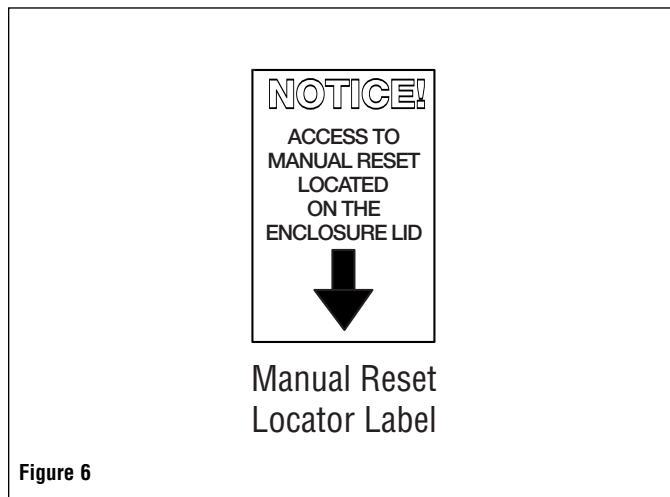


Figure 6

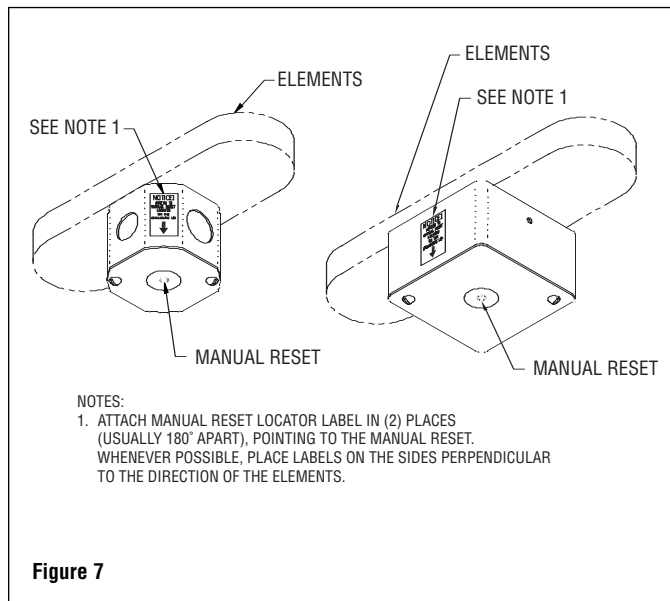


Figure 7

WIRING

⚠ WARNING

ELECTRIC SHOCK HAZARD. Any installation involving electric heaters must be performed by a qualified person and must be effectively grounded in accordance with the National Electrical Code to eliminate shock hazard.

1. Be sure line voltage matches heater voltage (on nameplate).

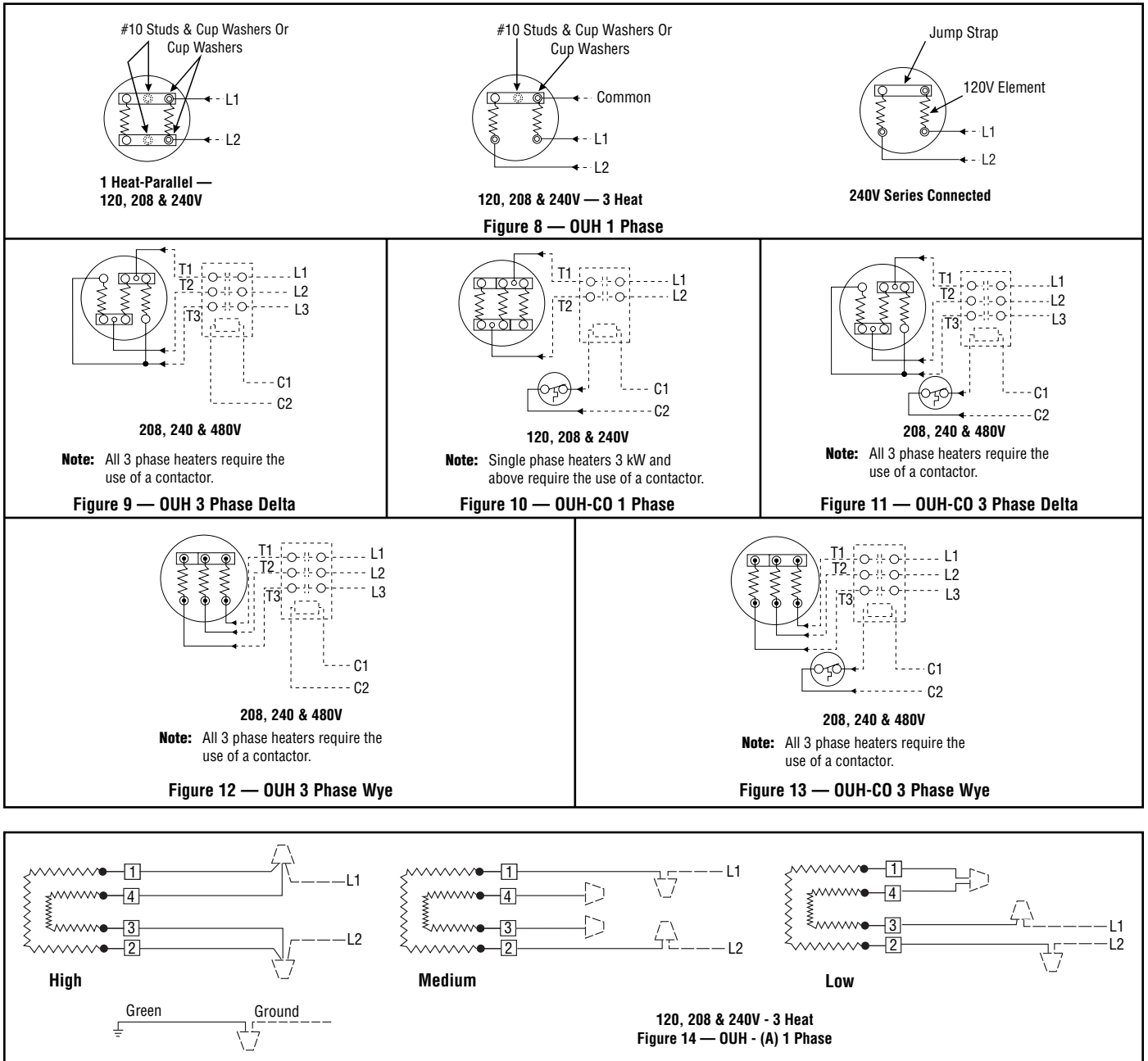
2. Electric wiring to heater must be installed in accordance with the National Electrical Code and with local codes by a qualified person.

CAUTION: Use copper conductors only.

3. When element wattages are not equal, heaters must not be connected in series.

4. Make necessary wiring connections as shown on wiring diagram (Figures 8 thru 13).

WIRING DIAGRAMS



Note: Contactors shown in Figure 9, 10, 11, 12 and 13 are supplied by customer.

OPERATION

1. Do not operate at voltages in excess of that stamped on the heater since excess voltage will shorten heater life.

IMPORTANT: Mount heater in the tank so the liquid level will always be above the effective heated portion of the heater. Provide expansion tank if necessary.

Note: The Thermal cutout on the OUH-CO provides run dry burn-

out protection only. Partial immersion of the elements while energized can shorten element life. The cutout is a safety device only and should not be used continuously as a low-liquid-level control.

MAINTENANCE

⚠ WARNING

ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater or resetting the manual reset button. Failure to do so could result in personal injury or property damage. Heater must be installed by a qualified person in accordance with the National Electrical Code. NFPA 70.

⚠ WARNING

IMPORTANT: It is the responsibility of the purchaser of the heater to make the ultimate choice of sheath material based upon his knowledge of the chemical composition of the corrosive solution, character of the materials entering the solution, and controls which he maintains on the process.

1. Heaters should be checked periodically for coatings and corrosion and cleaned if necessary.
2. Tank should be checked regularly for sediment around the heater. Sediment can act as an insulator and shorten heater life.
3. Check for loose terminal connections.
4. If corrosion is indicated in the terminal enclosure, check terminal box gasket and replace if necessary, and check conduit layout to correct conditions that allow corrosion to enter the terminal housing.
5. Clean terminal ends of all contamination.

WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

Ogden warrants only that the Products and parts manufactured by Ogden, when shipped, and the work performed by Ogden when performed, will meet all applicable specification and other specific product and work requirements (including those of performance), if any, and will be free from defects in material and workmanship under normal conditions of use. All claims for defective or nonconforming (both hereinafter called defective) Products, parts or work under this warranty must be made in writing immediately upon discovery, and in any event, within one (1) year from delivery, provided, however all claims for defective Products and parts must be made in writing no later than eighteen (18) months after shipment by Ogden. Defective and nonconforming items must be held for Ogden's inspections and returned to the original f.o.b. point upon request. THE FOREGOING IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES WHATSOEVER, EXPRESS, IMPLIED AND STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Notwithstanding the provisions of this WARRANTY AND LIMITATION Clause, it is specifically understood that Products and parts not manufactured and work not performed by Ogden are warranted only to the extent and in the manner that the same are warranted to Ogden by Ogden's vendors, and then only to the extent that Ogden is reasonably able to enforce such warranty, it being understood Ogden shall have no obligation to initiate litigation unless Buyer undertakes to pay all cost and expenses therefor, including but

not limited to attorney's fees, and indemnifies Ogden against any liability to Ogden's vendors arising out of such litigation.

Upon Buyer's submission of a claim as provided above and its substantiation, Ogden shall at its option either (i) repair or replace its Products, parts or work at the original f.o.b. point of delivery or (ii) refund an equitable portion of the purchase price.

THE FOREGOING IS OGDEN'S ONLY OBLIGATION AND BUYER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY, AND IS BUYER'S EXCLUSIVE REMEDY AGAINST OGDEN FOR ALL CLAIMS ARISING HEREUNDER OR RELATING HERETO WHETHER SUCH CLAIMS ARE BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES, BUYER'S FAILURE TO SUBMIT A CLAIM AS PROVIDED ABOVE SHALL SPECIFICALLY WAIVE ALL CLAIMS FOR DAMAGES OR OTHER RELIEF, INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON LATENT DEFECTS. IN NO EVENT SHALL BUYER BE ENTITLED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES AND BUYER SHALL HOLD OGDEN HARMLESS THEREFROM. ANY ACTION BY BUYER ARISING HEREUNDER OR RELATING HERETO, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES, MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE DATE OF SHIPMENT OR IT SHALL BE BARRED.

W2008M



103 GAMMA DRIVE, PITTSBURGH, PA 15238
PHONE: 1-800-OMC-4291 FAX: 1-888-OMC-9890
www.ogdenmfg.com