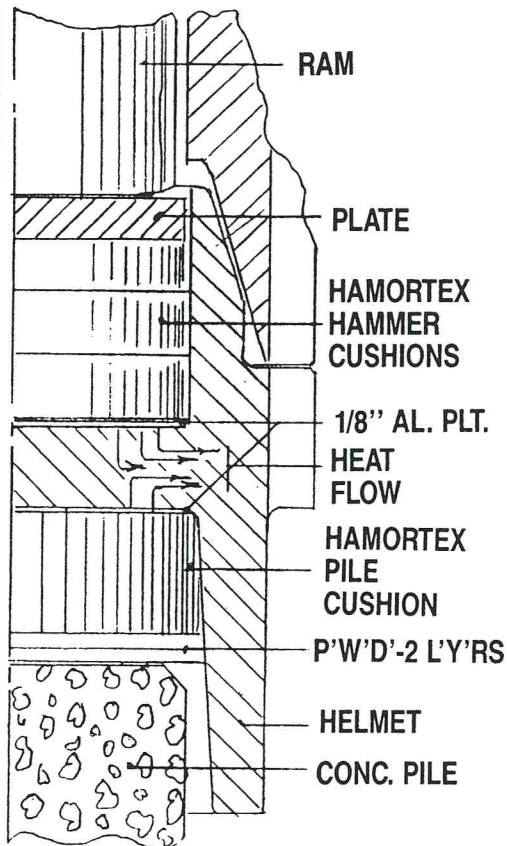


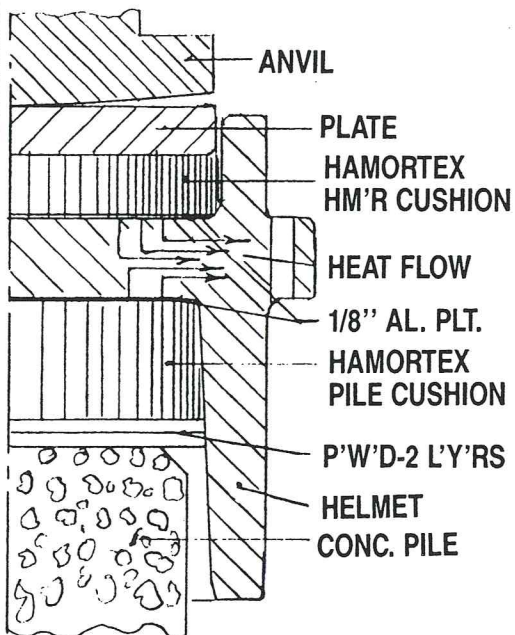
# HAMORTEX<sup>®</sup>

## PILE HAMMER CUSHIONS

USA Pat. 4,366,870 Can. Pat. 1,150,523 Eur. Pat. Appln. 80,902,263<sup>®</sup> T.M. Reg. 1,198,494



**VULCAN & CONMACO AIR HAMMERS**



**MKT & DELMAG DIESEL HAMMERS**

### HAMORTEX HAMMER CUSHIONS & HAMORTEX PILE CUSHIONS

These cushions are fabricated from a special laminated fibre and aluminum for PILE DRIVING USE so as to MAXIMIZE the hammer energy output while MINIMIZING feed-back stresses that cause hammer failure and excessive compression and tension stresses that cause pile damage.

When the cushions are placed in the helmet and impacted by the hammer a subtle, highly dampened spring effect develops having a very short travel. The Engineering characteristics and Curves are on the reverse side.

#### OTHER ADVANTAGES:

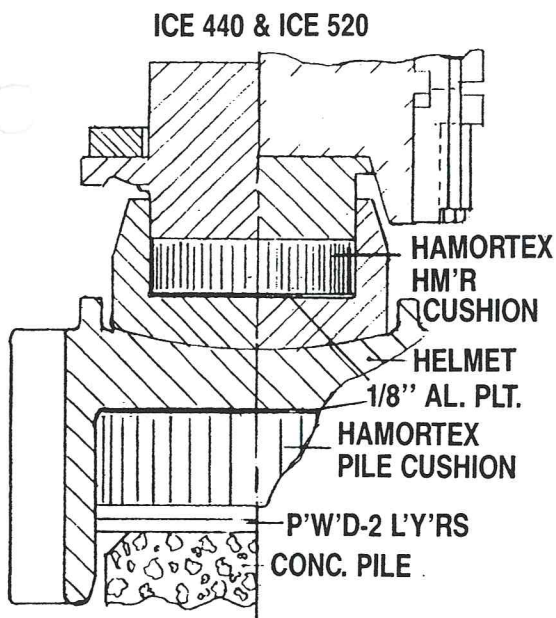
1. Heat dissipating system in the fibre prevents burning.
2. Conforms easily to irregular and non-parallel surfaces.
3. Easily installed by simply fitting the roll to the cup by unwinding the excess!
4. Does not work harden; stack can be rebuilt by adding more layers.
5. TWO GRADES OF MATERIAL TO CHOOSE FROM:

HAMORTEX-S: For light to medium driving.

HAMORTEX-X: For hard continuous driving.

\* **NOTE:** Experience has shown that when both, the hammer and the pile cushions have the same modular values (as is the case when a contractor utilizes Hamortex Pile Cushion in conjunction with Hamortex Hammer Cushion) the two materials will function in unison, thus causing a more efficient transfer of energy to the pile, otherwise the harder cushion may over-work the softer, causing less driving energy being transfered to the pile, as well as the possibility of causing pile damage or excessive hammer wear.

**Frederick Engineering manufacturers both!**  
**Pile Cushions and**  
**Pile Hammer Cushions.**



#### DIESEL HAMMERS

-S or -X	STANDARD SIZES		
SIZE DIA/TK	AIR-STEAM HAMMER MDLS.	CUP Dph	NO Rqd
11½x2½"	Vul #1, 06, 50C, 65C, 506. Con. #50, 65	8"	2
14x2½"	Vul 80C, 0, 0R, 08, 010, Con. 80, 10, 115, 125	10"	3
1½x2½"	Vul 140C, 014, 016 Con. 140, 160	8½"	2
20x2½"	Vul 200C, 020, 030	8½"	2
23x2½"	Con. 200, 300, 5300	10"	3

#### DIESEL HAMMERS

14x2½"	MKT DE-10, Del. D-5	4"	1
19x2½"	MKT DE-30, Del. D-12	4"	1
23x2½"	MKT DE-40, Del. D30	4"	1

#### ICE (LB) DIESEL HAMMERS

11x3½"	ICE 312, 440, 520	3½"	1
15x3½"	ICE 660	3½"	1
25x2½"	ICE 1070	4"	1

OFF-SHORE HMR's Cushions on request

#### PILE CUSHIONS

Cushion sizes are the same as the concrete pile they are to be used with, i.e. 12x12", 14x14" and etc. Standard thickness (height) 5".



## DEFLECTION CHARACTERISTICS HAMORTEX-S CUSHION MATERIAL

The values presented are certified by the supplier to have been tested in accordance with the DFI's standard testing method. The DFI does not certify the test date, endorse the material, or define the utilization of the values obtained.

SUPPLIER: Fredrick Engineering Co.  
15 Crestview Terrace  
Whippany, NJ 07981

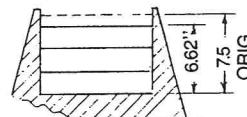
LABORATORY: Brown University  
Providence, RI

DATE OF TEST: 22MAY84

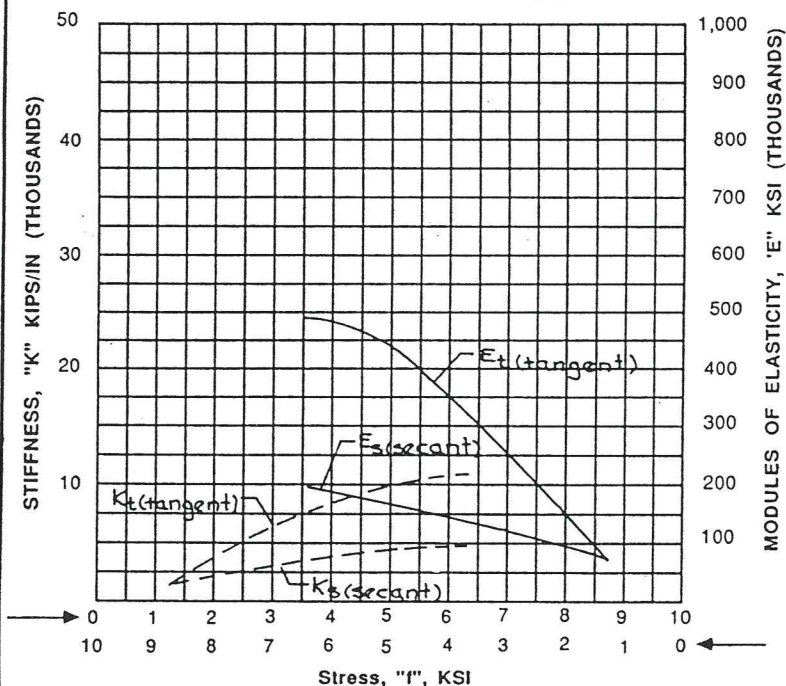
PERSONNEL:

MATERIAL: Wound coils of fibre laminated with aluminum foil.

SIZE: 14.00" O.D. X 6.62" Thick, Area 156 sq. in. Used Cond.  
Original thickness of 3 coil stack, 7.5"



COEFFICIENT OF RESTITUTION,  $e = 0.78$



Prior to this insitu static compression test, the specimen served under a Vulcan 80C to drive 68-14 x 3/8"-52' pipe piles to 7 bpi.

Approx. cushion unit stress for FEC, MKT and Delmag diesel hammers in bearing zone,  $f = 3\text{KSI}$ ,  $E_s = 130\text{K}$ ; for Vulcan type air-steam hmr's.  $f = 6.5\text{KSI}$ ,  $E_s = 197\text{K}$ .

FREDERICK ENGR. CO. does not accept any liability of any type for hammer, drive cap or pile damage or failures while using HAMORTEX CUSHIONS.

## MANUFACTURER:

**FREDERICK ENGINEERING CO.**  
15 CRESTVIEW TERR., WHIPPANY, N.J. 07981  
TEL. (201) 887-1256

## DISTRIBUTORS:

**Rigler Equipment Co.**  
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**Pile Equipment, Inc.**  
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