

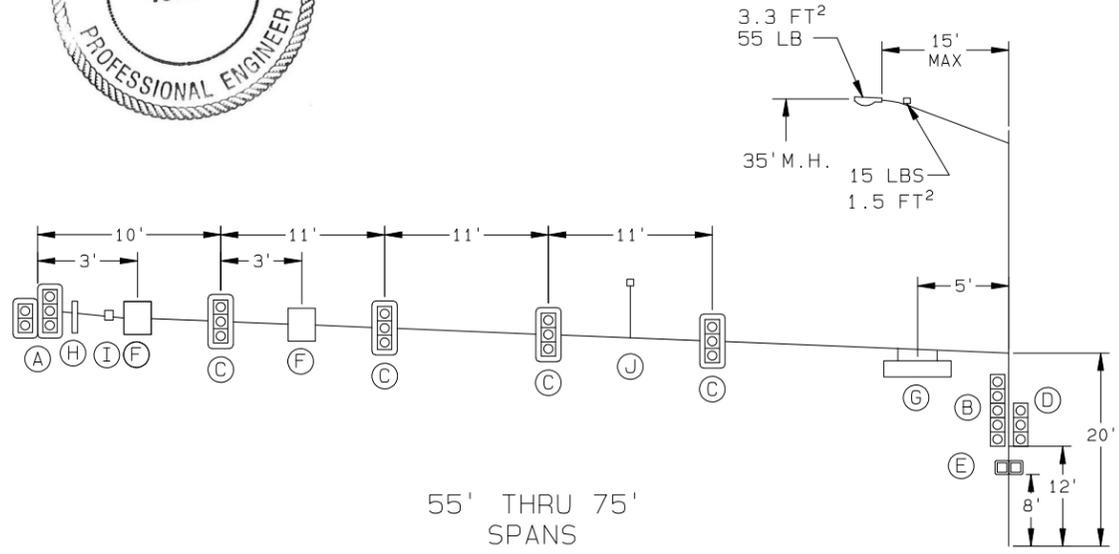
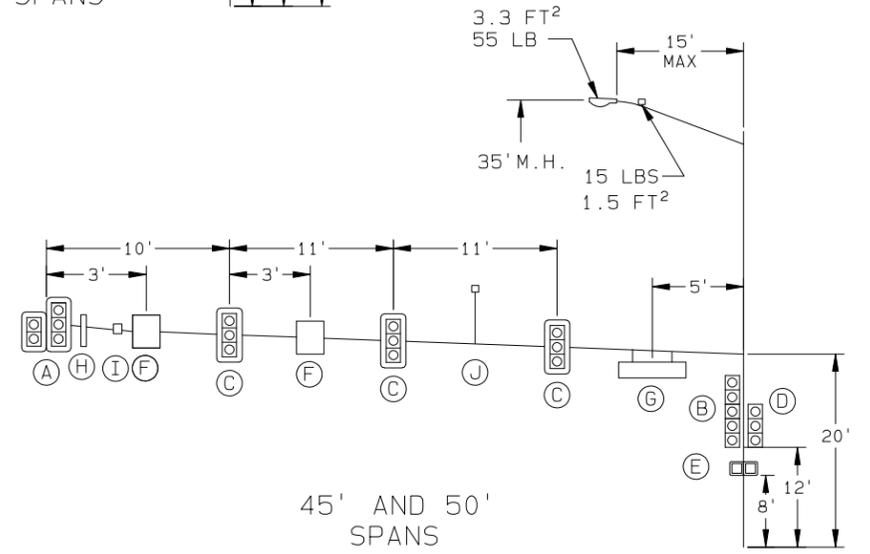
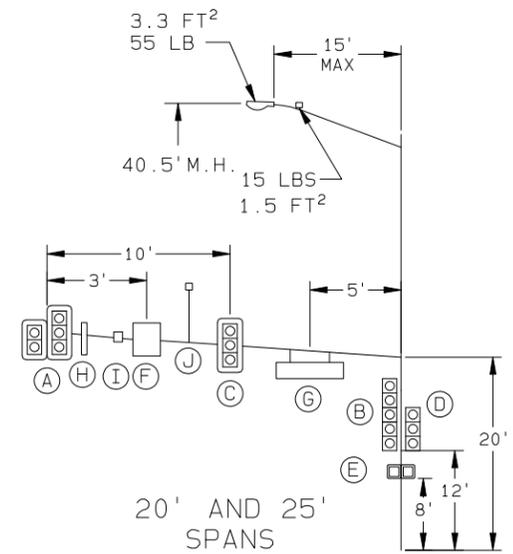
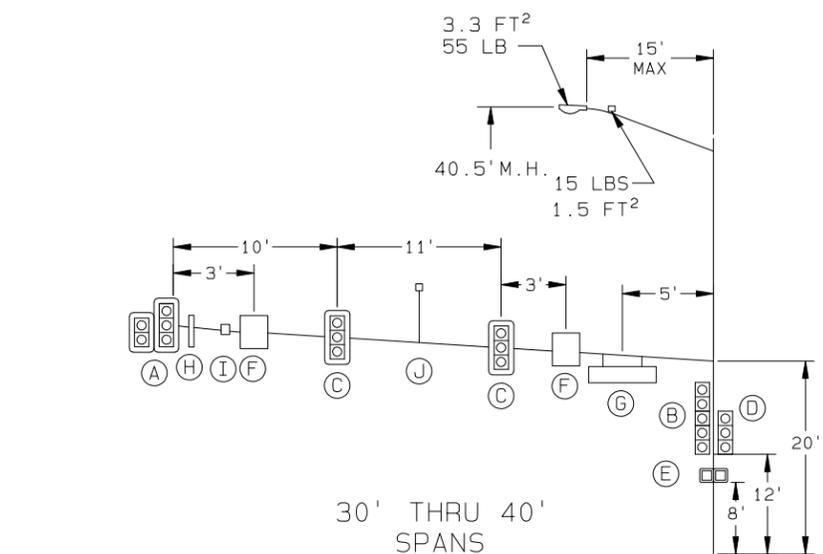
FINISH:
 BASE COAT: HOT DIP GALVANIZED TO ASTM: A123
 PRIME COAT: NEW HIGH BUILD EPOXY POWDER
 FINISH COAT: TGIC OR SUPER DURABLE POLYESTER POWDER
 COLOR: MOSS GREEN (RAL #6005)
 VALMONT SPEC: F540AE

MATERIAL DATA

| COMPONENT | ASTM DESIGNATION | MIN. YIELD (KSI) | COMPONENT | ASTM DESIGNATION | MIN. YIELD (KSI) |
|-----------------------|--------------------|------------------|----------------------|------------------|------------------|
| POLE BASE | A36 | 36 | GALVANIZING HARDWARE | F2329 | |
| LUM. ARM ATTACHMENT | A36 | 36 | ANCHOR BOLTS | F1554 GR. 55 | 55 |
| LUM. ARM CONN. BOLTS | SAE GR. 5 | | | | |
| SIGNAL ARM ATTACHMENT | A36 | 36 | | | |
| SIG. ARM CONN. BOLTS | F3125 GR. A325 | | | | |
| TAPERED TUBES | A595 GR. A OR A572 | 55 | | | |

DESIGN CRITERIA:
 THE SIGNAL MAST ARM TRAFFIC STRUCTURES SHOWN ON THIS DRAWING HAVE BEEN DESIGNED IN ACCORDANCE WITH THE LOADING AND NOMINAL STRENGTH REQUIREMENTS OF THE 2015 AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, FIRST EDITION" SLTS-1 INCLUDING LATEST INTERIMS. THE WIND LOADS WERE CALCULATED FROM AN ULTIMATE WIND VELOCITY OF 120MPH WITH A MEAN RECURRENCE INTERVAL OF 1700 YEARS AND A FATIGUE CATEGORY OF II. THE FATIGUE LOADS WERE CALCULATED ON THE REQUIREMENTS OF SECTION 11 OF THE CODE, AND THE FOLLOWING

- DESIGN CONDITIONS:**
- STRUCTURES ARE DESIGNED TO RESIST NATURAL WIND GUSTS BASED ON THE YEARLY MEAN WIND VELOCITY OF 11.2 MPH.
 - STRUCTURES ARE NOT DESIGNED TO RESIST GALLOPING-INDUCED CYCLIC LOADS.
 - STRUCTURES ARE DESIGNED FOR TRUCK-INDUCED GUST LOADS, AS REQUIRED BY THE OWNER OF THE STRUCTURES.



THIS DRAWINGS AASHTO CODE COMPLIANCE IS CONTINGENT ON THE MANDATORY USE OF THE MITIGATOR (TR1) IN CONJUNCTION WITH THIS STRUCTURE DESIGN. OMITTING SUCH DEVICE, VOIDS PE STAMP AND SHALL NOT BE CONSIDERED TO MEET AASHTO.

| DEVICE | DESCRIPTION | PROJ. AREA (FT²) | WEIGHT (LBS) |
|--------|------------------------------------------------|------------------|--------------|
| (A) | 12"-5 SEC. SIGNAL WITH BACKPLATE | 13.72 | 75 |
| (B) | 12"-5 SEC. SIGNAL WITHOUT BACKPLATE | 6.28 | 55 |
| (C) | 12"-3 SEC. SIGNAL WITH BACKPLATE | 8.67 | 45 |
| (D) | 12"-3 SEC. SIGNAL WITHOUT BACKPLATE | 4.08 | 40 |
| (E) | 16" X 16" DUEL PEDESTRIAN HEADS | 8.00 | 80 |
| (F) | 30" X 36" REGULATORY SIGN | 7.50 | 25 |
| (G) | 20" X 96" ILLUMINATED STREET NAME SIGN | 13.33 | 80 |
| (H) | TR1 MITIGATOR DEVICE | 1.20 | 38 |
| (I) | PREEMPTIVE SENSOR | 0.50 | 10 |
| (J) | CAMERA/RADAR TRAFFIC SENSOR W/5' EXTENSION ARM | 2.30 | 50 |

MAXIMUM LOADING INFORMATION

| REV | DRAWN BY-DATE | CHECK BY-DATE | DESCRIPTION |
|-----|---------------|---------------|-------------|
| --- | RDS9 01/16/26 | RDS9 01/16/26 | --- |

TITLE CITY OF BRIGHTON, COLORADO
 TRAFFIC SIGNAL STRUCTURES
 2015 AASHTO DESIGN

VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.



| |
|---------------------|
| PAGE NUMBER: 1 OF 3 |
| DRAWING NUMBER |
| REV |
| TK01489 |

POLE DATA

| QTY. | ITEM | DESIGN NUMBER | SINGLE ARM SPAN (FT) | SIGNAL ARM | POLE BASE | ANCHOR BOLT | | | |
|------|----------|---------------|----------------------|----------------------------|----------------------|---------------|-----------------|---------------|------------------------|
| | | | | SIMPLEX BOLT SIZE "F" (IN) | BOLT CIRCLE "Y" (IN) | DIA. "K" (IN) | LENGTH "J" (IN) | HOOK "H" (IN) | THREAD LENGTH "U" (IN) |
| | BRIGHTON | 1 | 20 | 1.25 X 4.25 | 17.00 | 1.50 | 54.00 | 6.00 | 8.00 |
| | BRIGHTON | 1 | 25 | 1.25 X 4.25 | 17.00 | 1.50 | 54.00 | 6.00 | 8.00 |
| | BRIGHTON | 2 | 30 | 1.25 X 4.25 | 18.00 | 1.75 | 84.00 | 6.00 | 8.00 |
| | BRIGHTON | 2 | 35 | 1.25 X 4.25 | 18.00 | 1.75 | 84.00 | 6.00 | 8.00 |
| | BRIGHTON | 2 | 40 | 1.25 X 4.25 | 18.00 | 1.75 | 84.00 | 6.00 | 8.00 |
| | BRIGHTON | 3 | 45 | 1.25 X 4.25 | 20.50 | 1.75 | 84.0 | 6.00 | 8.00 |
| | BRIGHTON | 3 | 50 | 1.25 X 4.25 | 20.50 | 1.75 | 84.00 | 6.00 | 8.00 |
| | BRIGHTON | 4 | 55 | 1.50 X 4.50 | 22.50 | 2.00 | 84.00 | 6.00 | 10.00 |
| | BRIGHTON | 4 | 60 | 1.50 X 4.50 | 22.50 | 2.00 | 84.00 | 6.00 | 10.00 |
| | BRIGHTON | 4 | 65 | 1.50 X 4.50 | 22.50 | 2.00 | 84.00 | 6.00 | 10.00 |
| | BRIGHTON | 5 | 70 | 1.50 X 5.00 | 24.00 | 2.25 | 89.00 | 7.00 | 12.00 |
| | BRIGHTON | 5 | 75 | 1.50 X 5.00 | 24.00 | 2.25 | 89.00 | 7.00 | 12.00 |

LUMINAIRE ARM DATA

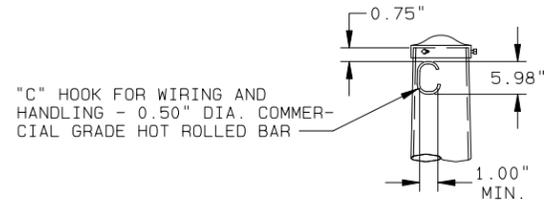
| QTY. | ARM SPAN "L" (FT) | RISE HEIGHT "R" |
|------|-------------------|-----------------|
| | 12.00 | 2'-6" |
| | 15.00 | 3'-0" |

TITLE
 CITY OF BRIGHTON, COLORADO
 TRAFFIC SIGNAL STRUCTURES
 2015 AASHTO DESIGN

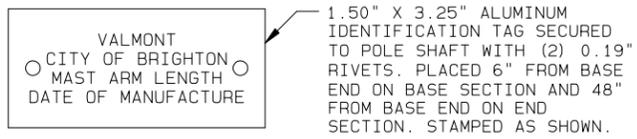
VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.



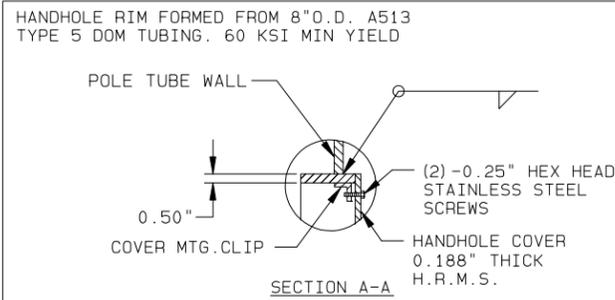
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 DRAWING NUMBER: TK01489
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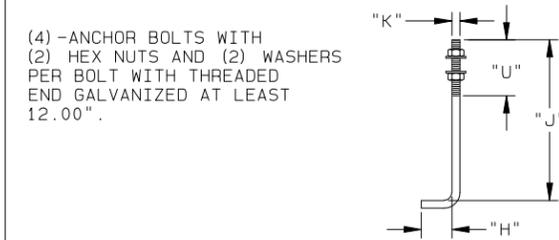
DETAIL 1 POLE TOP



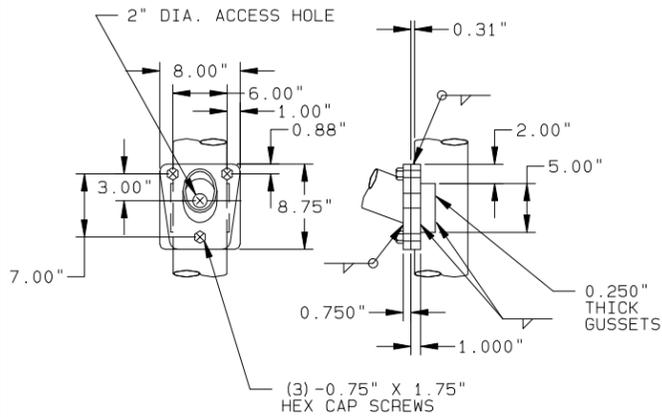
DETAIL 4 MAST ARM I.D. TAG



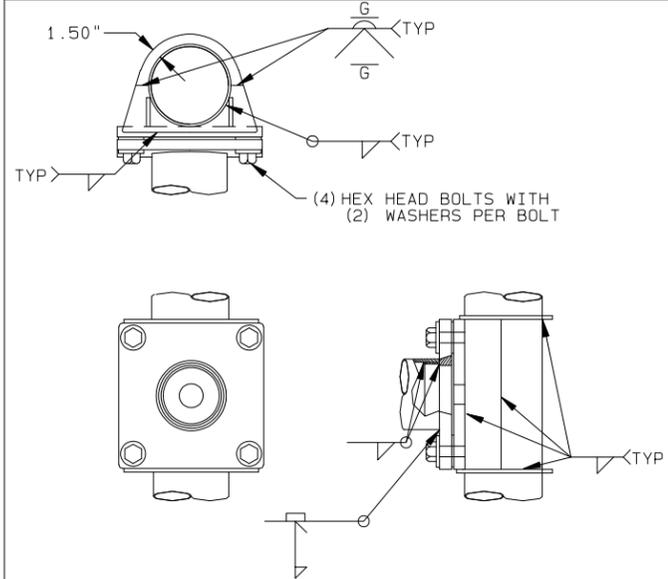
DETAIL 6 HANDHOLE



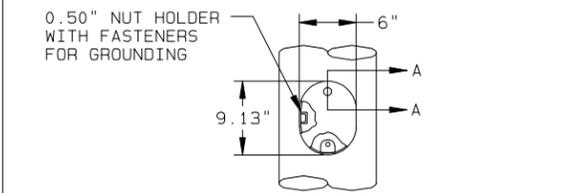
DETAIL 10 ANCHOR BOLT



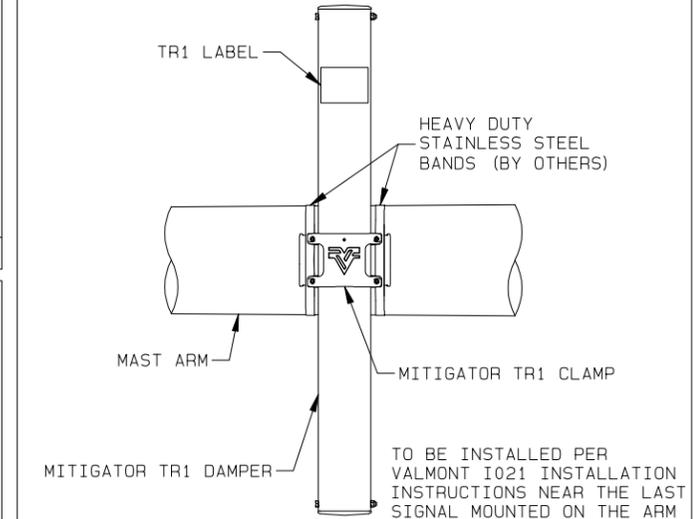
DETAIL 2 LUMINAIRE ARM ATTACHMENT



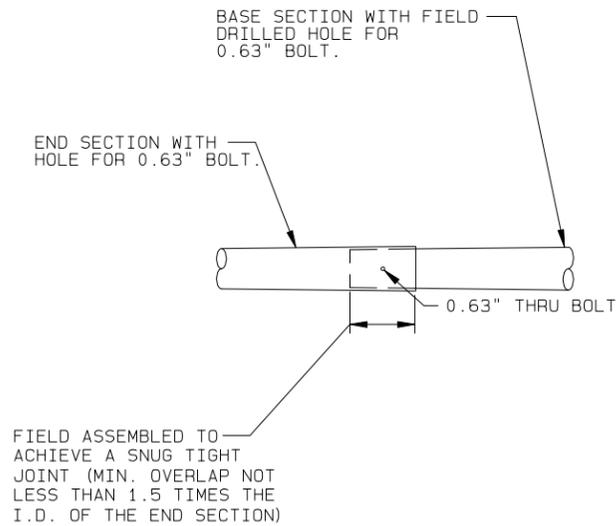
DETAIL 4 SIGNAL ARM ATTACHMENT



DETAIL 7 NUT COVER DESIGNS 1-4

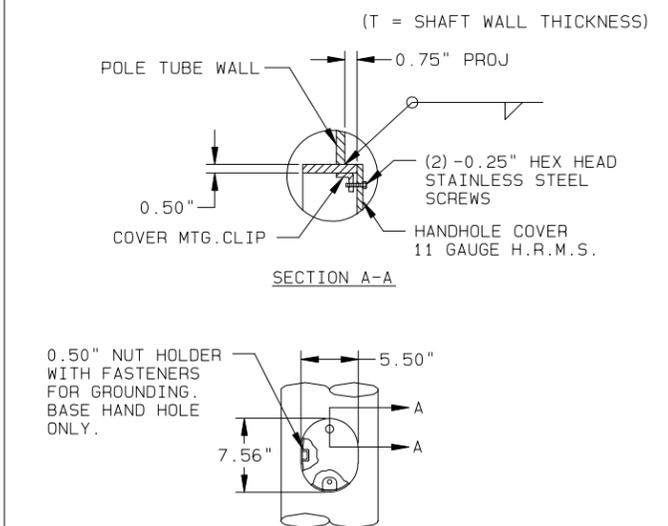


DETAIL 11 TR1 MITIGATOR

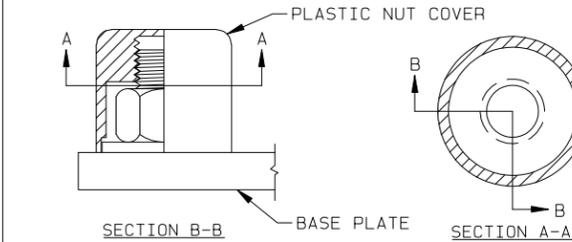


DETAIL 3 SIGNAL ARM SLIP JOINT

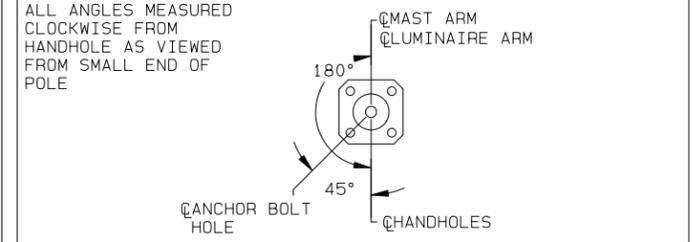
| SPAN | BASE SECTION | | | |
|--------|--------------|-----------|--------|-------|
| | LENGTH | WALL THK. | LENGTH | GAUGE |
| 55.00' | 12.39' | 0.250" | 45.37' | 7 |
| 60.00' | 15.97' | 0.250" | 46.81' | 7 |
| 65.00' | 19.54' | 0.250" | 48.24' | 7 |
| 70.00' | 33.70' | 0.313" | 38.96' | 7 |
| 75.00' | 33.70' | 0.313" | 43.97' | 7 |



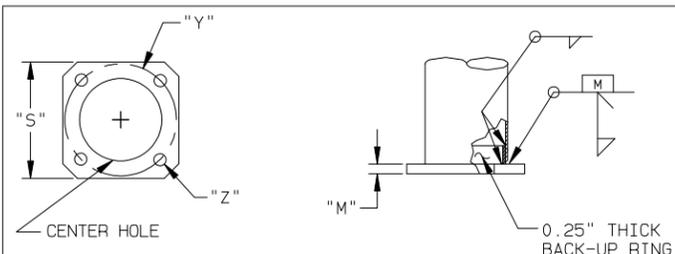
DETAIL 5 4"x6.5" HANDHOLE



DETAIL 8 NUT COVER DESIGN 5



RADIAL INDEX



DETAIL 9 POLE BASE

ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

VIBRATION DISCLAIMER