

BASIC PROCEDURES

UNITIZATION PROCEDURES FOR PROPELLING CHARGES PACKED IN CYLINDRICAL METAL CONTAINERS ON 4-WAY ENTRY PALLETS

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NOTICE: THIS BASIC PROCEDURES DRAWING WILL BE AUGMENTED BY SEPARATELY ISSUED APPENDICES BEARING THE DRAWING AND FILE NUMBERS OF THIS DOCUMENT. AN APPENDIX WILL DELINEATE THE APPROVED CONFIGURATIONS OF A UNIT LOAD FOR A SPECIFIC SERIES CONTAINER WITH AMMUNITION ITEMS. APPENDICES CANNOT STAND ALONE, BUT MUST BE USED IN CONJUNCTION WITH THE BASIC PROCEDURES DRAWING. THE DRAWING NUMBER FOR EACH APPENDIX WILL CONTAIN A SUB NUMBER FOR IDENTIFICATION (E.G., THE DRAWING NUMBER FOR APPENDIX 3 WILL BE 19-48-4040A/3-20PM1001).

NOTICE: THIS DRAWING SUPERCEDES THE PALLET UNIT DETAIL PORTIONS DELINEATED ON PAGES 4 THRU 16 OF DRAWING 19-48-4042-1-2-5-11-14PM1000, DATED 8 FEBRUARY 1965, AND REVISION 1, DATED 29 AUGUST 1969. HOWEVER, THE PALLET UNIT DATA WITHIN DRAWING 19-48-4042-1-2-5-11-14PA1000 WILL CONTINUE TO BE VALID FOR EACH ITEM LISTED WITHIN THAT DRAWING UNTIL SUPERCEDED BY AN APPENDIX TO THIS DOCUMENT FOR THAT ITEM.

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U.S. ARMY MATERIEL COMMAND DRAWING

<p>APPROVED, U.S. ARMY RESEARCH, DEVELOPMENT AND ENGINEERING COMMAND</p> <p>REHMSTEDT.MA RK.J.1230548400</p> <p style="font-size: small;">Digitally signed by REHMSTEDT.MARK.J.1230548400 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.12.28 10:42:37 -0600</p> <p style="text-align: right;">RDAR-EIL-TP</p>	<p>CAUTION: VERIFY PRIOR TO USE AT WWW.DAC.ARMY.MIL THAT THIS IS THE MOST CURRENT VERSION OF THIS DOCUMENT. THIS IS PAGE 1 OF 12.</p>		<p>DO NOT SCALE</p>		<p>DECEMBER 1978</p>																					
<p>APPROVED, U.S. ARMY JOINT MUNITIONS COMMAND</p> <p>CASILLAS.GILBE RT.J.1230393644</p> <p style="font-size: small;">Digitally signed by CASILLAS.GILBERT.J.1230393644 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2012.01.09 10:21:01 -0600</p> <p style="text-align: right;">AMSJM-LIT</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">ENGINEER OR TECHNICIAN</td> <td style="width: 20%;">BASIC</td> <td colspan="2" style="text-align: center;">GEORGE PHILLIPS</td> </tr> <tr> <td></td> <td style="text-align: center;">REV.</td> <td colspan="2" style="text-align: center;">CLINTON COSGROVE</td> </tr> </table>	ENGINEER OR TECHNICIAN	BASIC	GEORGE PHILLIPS			REV.	CLINTON COSGROVE		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">REVISION NO. 6</td> <td style="width: 50%;">NOVEMBER 2011</td> </tr> </table>	REVISION NO. 6	NOVEMBER 2011	<p>SEE THE REVISION LISTING ON PAGE 4</p>													
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<p>APPROVED BY ORDER OF COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND</p> <p>CARNEY.GARY.BURTON.1038708038</p> <p style="font-size: small;">Digitally signed by CARNEY.GARY.BURTON.1038708038 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2012.01.10 09:44:46 -0600</p> <p style="text-align: center;">U.S. ARMY DEFENSE AMMUNITION CENTER</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">TRANSPORTATION ENGINEERING DIVISION</td> <td style="width: 30%;">FIEFFER.LAURA.A.1230375727</td> <td style="width: 30%;">TESTED</td> <td style="width: 10%;"></td> </tr> <tr> <td style="font-size: small;">Digitally signed by FIEFFER.LAURA.A.1230375727 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.07 10:54:23 -0600</td> <td></td> <td></td> <td></td> </tr> <tr> <td>VALIDATION ENGINEERING DIVISION</td> <td>BARICKMAN.PHILIP.W.1230202202</td> <td style="font-size: small;">Digitally signed by BARICKMAN.PHILIP.W.1230202202 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.07 10:54:58 -0600</td> <td></td> </tr> <tr> <td>ENGINEERING DIRECTORATE</td> <td>BEAVER.JERRY.W.1230949952</td> <td style="font-size: small;">Digitally signed by BEAVER.JERRY.W.1230949952 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.08 13:52:34 -0600</td> <td></td> </tr> </table>	TRANSPORTATION ENGINEERING DIVISION	FIEFFER.LAURA.A.1230375727	TESTED		Digitally signed by FIEFFER.LAURA.A.1230375727 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.07 10:54:23 -0600				VALIDATION ENGINEERING DIVISION	BARICKMAN.PHILIP.W.1230202202	Digitally signed by BARICKMAN.PHILIP.W.1230202202 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.07 10:54:58 -0600		ENGINEERING DIRECTORATE	BEAVER.JERRY.W.1230949952	Digitally signed by BEAVER.JERRY.W.1230949952 DN: cn=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, c=US Date: 2011.11.08 13:52:34 -0600		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">CLASS</td> <td style="width: 15%;">DIVISION</td> <td style="width: 15%;">DRAWING</td> <td style="width: 15%;">FILE</td> </tr> <tr> <td style="text-align: center;">19</td> <td style="text-align: center;">48</td> <td style="text-align: center;">4042A</td> <td style="text-align: center;">20PM1001</td> </tr> </table>	CLASS	DIVISION	DRAWING	FILE	19	48	4042A	20PM1001
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GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5) AND CONFORMS TO MIL-STD-1660.
- B. APPROVED SPECIFICATIONS, COVERING THE ASSEMBLAGE AND UNITIZATION OF PROPELLING CHARGES INTO UNIT LOADS, ARE SET FORTH IN THIS DRAWING. THIS DRAWING WILL BE CONSIDERED THE BASIC DOCUMENT FOR THE UNITIZATION OF PROPELLING CHARGES PACKED IN METAL CONTAINERS, EXCEPT FOR SOME RESTRICTED ITEMS. THIS DOCUMENT INCLUDES MATERIAL SPECIFICATIONS AND UNITIZING STANDARDS APPLICABLE TO UNITIZATION, PLUS INFORMATION RELATIVE TO TYPICAL POSITIONING OF PROPELLING CHARGES ON A PALLET AND INSTALLATION OF UNITIZING STEEL STRAPPING. FOR TYPICAL UNITIZATION PROCEDURES AND TYPICAL FILLER ASSEMBLIES, SEE PAGES 4 THRU 10. ADDITIONALLY, "PROVISIONS FOR LESS-THAN-FULL-LAYER UNIT LOADS" ARE SPECIFIED ON PAGE 4.
- C. APPENDICES PERTAINING TO THIS BASIC DOCUMENT WILL BE ISSUED SEPARATELY. HOWEVER, ALL APPENDICES ARE A PART OF THIS BASIC PROCEDURES DRAWING. EACH APPENDIX WILL COVER THE APPROVED CONFIGURATIONS FOR A UNIT LOAD, THE SPECIFIC UNITIZATION PROCEDURES AND THE PERTINENT TABULAR DATA FOR ONE UNIQUE SERIES CONTAINER.
- D. GENERALLY, UNIT LOADS SHOWN IN THE APPENDICES WILL CONFORM TO THE STANDARDS LISTED BELOW. A SMALL PERCENTAGE OF UNITS MAY EXCEED THESE LIMITS IN ORDER TO BUILD ECONOMICAL AND PRACTICABLE PALLET UNITS:
1. GROSS WEIGHTS OF PALLETIZED UNIT LOADS ARE BASED ON AN OPTIMUM MAXIMUM WEIGHT OF 2,464 POUNDS, DUE TO MATERIAL HANDLING EQUIPMENT CONSIDERATIONS. UNLESS SPECIFICALLY RESTRICTED BY ANOTHER AUTHORITY DOCUMENT, THE MAXIMUM GROSS WEIGHT OF AMMUNITION UNIT LOADS IS 4,000 POUNDS.
 2. PALLETIZED UNITS OF PROPELLING CHARGES ARE LIMITED TO NOT MORE THAN TWO LOTS PER UNIT, EXCEPT WHERE REQUIRED BY BALLISTIC SAMPLE SHIPMENT OR TROOP USE AT POST, CAMP, OR STATION. THESE UNITS ARE FURTHER RESTRICTED TO NOT MORE THAN ONE LOT PER CONTAINER WITHIN A PALLETIZED UNIT, SEE GENERAL NOTE "S" ON PAGE 3.
 3. THE UNIT LOAD SHOULD EITHER SLIGHTLY OVERHANG THE PALLET OR BE FLUSH WITH THE PALLET ON ALL FOUR SIDES. WHEN IT IS NECESSARY TO ENLARGE THE LOAD TO MATCH THE DIMENSIONS OF THE PALLET, THE DUNNAGE ASSEMBLIES WILL BE CONSTRUCTED IN SUCH A MANNER THAT THE CONTAINERS ARE HELD IN PLACE AND THE PALLET IS FILLED OUT COMPLETELY.
 4. A UNIT LOAD, SUCH AS THE LAST UNIT LOAD FOR A PROPELLING CHARGE LOT, CAN BE ASSEMBLED WITH LESS LAYERS THAN SPECIFIED FOR THE BASIC UNIT LOAD. HOWEVER, UNIT LOADS, INCLUDING PARTIAL UNIT LOADS, WILL NOT BE ASSEMBLED WITH A PARTIAL LAYER. EMPTY CONTAINERS OR DUNNAGE WILL BE USED TO ACHIEVE FULL-LAYER UNIT LOADS. FOR SPECIFIC GUIDANCE, SEE THE "PROVISIONS FOR LESS-THAN-FULL-LAYER UNIT LOADS" ON PAGE 4.
- E. ANY REQUEST FOR DEVIATION FROM THE STANDARDS DESCRIBED IN GENERAL NOTE "D" OR FROM THE PROCEDURES DELINEATED IN AN APPENDIX MUST BE DIRECTED TO THE COMMANDER, U.S. ARMY RDECOM-ARDEC, ATTN: RDAR-EIL-TP, ROCK ISLAND, IL 61299-7300, FOR SPECIFIC APPROVAL. FOR EXAMPLE, SPECIFIC APPROVAL MUST BE OBTAINED FOR UNITIZATION OF AN ITEM WHEN PACKED IN METAL CONTAINERS WHICH ARE DIFFERENT IN SIZE THAN THOSE SHOWN IN THE APPENDIX FOR THAT ITEM, EVEN THOUGH THE UNIT LOAD MAY COMPLY WITH THE STANDARDS DESCRIBED IN GENERAL NOTE "D".
- F. PROPELLING CHARGES UNITIZED PRIOR TO DISTRIBUTION OF THIS DRAWING OR OF AN APPENDIX THERETO, NEED NOT BE REUNITIZED SOLELY TO CONFORM TO THE STANDARDS SPECIFIED HEREIN OR WITHIN AN AUGMENTING APPENDIX. HOWEVER, CONTAINER AND STRAP ALIGNMENT MUST CONFORM WITH THE TOLERANCE STANDARDS SPECIFIED ON PAGE 11 OF THIS DRAWING BEFORE A UNIT IS ACCEPTABLE FOR SHIPMENT. ALSO THE CONDITION OF THE UNITIZING STRAPPING ON A UNIT LOAD MUST COMPLY WITH THE CRITERIA OF GENERAL NOTE "N" AT RIGHT.
- G. DIMENSIONAL LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWING IS OF NOMINAL SIZE UNLESS OTHERWISE SPECIFIED. FOR EXAMPLE, 1" X 4" MATERIAL IS ACTUALLY 3/4" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-1/2" THICK BY 5-1/2" WIDE.
- H. UNLESS OTHERWISE SPECIFIED, A PLUS-OR-MINUS 1/4" IS ALLOWED ON OVERALL DIMENSIONS OF ANY PIECE OF DUNNAGE OR DUNNAGE ASSEMBLY. HOWEVER, SIMILAR PIECES IN AN ASSEMBLY MUST BE WITHIN 1/8" OF THE SAME DIMENSION.

(CONTINUED AT RIGHT)

(GENERAL NOTES CONTINUED)

- J. UNIT LOADS MUST ONLY BE MADE UP WITH FULL LAYERS, HOWEVER, FOR REDUCED QUANTITIES, ONE OR MORE FULL LAYERS MAY BE OMITTED, AND/OR A LAYER MAY CONSIST OF LOADED CONTAINERS AND A FILLER ASSEMBLY OR AN EMPTY CONTAINER(S). SEE THE "PROVISIONS FOR LESS-THAN-FULL-LAYER UNIT LOADS" ON PAGE 4. ONLY ONE PALLETIZED UNIT HAVING A REDUCED QUANTITY OF CONTAINERS SHOULD BE PERMITTED PER LOT FOR THAT ITEM. CARE SHALL BE TAKEN TO INSURE "REDUCED QUANTITY" UNITS ARE EVENLY ALIGNED HORIZONTALLY AND VERTICALLY SO THAT THE SIDES AND ENDS OF THE UNIT LOAD DO NOT EXCEED A 1/2" TOLERANCE, RELATIVE TO THE PALLET. SEE "UNIT ASSEMBLY TOLERANCES" DETAILS ON PAGE 11.
- K. IN ORDER TO OBTAIN COMPACT (SOUND) UNITS, ALL STRAPS SHALL BE LOCATED IN PROPER ALIGNMENT AND TENSIONED UNTIL THEY CUT INTO THE EDGE OF THE STRAPPING BOARDS OR TOP DUNNAGE ASSEMBLY AND THE PALLET WITHOUT DAMAGING THE CONTAINER OR CONTENTS. AFTER TENSIONING, ALL STRAPS WILL BE SECURED USING ONE SEAL AND TWO PAIR OF NOTCHES PER SEAL. SEE "UNIT ASSEMBLY TOLERANCES" DETAILS ON PAGE 11. SEALS MAY BE LOCATED ON A SIDE OR ON THE TOP OF THE UNIT, AS REQUIRED BY OPERATIONAL NECESSITY.
- L. WHEN APPLYING ANY STRAP, CARE MUST BE EXERCISED TO ASSURE THAT THE END OF THE STRAP ON THE UNDERSIDE OF THE JOINT EXTENDS AT LEAST 6" BEYOND THE SEAL. THIS EXTRA MINIMUM LENGTH OF STRAP IS REQUIRED TO PERMIT SUBSEQUENT TIGHTENING OF LOOSENED STRAPPING. RETENSIONING CAN BE ACCOMPLISHED WITHOUT REPLACING STRAPPING OR SPLICING STRAPPING THROUGH THE USE OF A TENSIONING TOOL, MANUAL OR PNEUMATIC, AND THE APPLICATION OF ONE ADDITIONAL SEAL. SEE THE "STRAP RETENSIONING TAB" DETAIL ON PAGE 11.
- M. DETERMINATION OF LENGTH OF STRAPPING. THE FOLLOWING DEFINITIONS APPLY:
- L = LENGTH OF STRAP REQUIRED, IN INCHES
A = LENGTH OF UNIT IN INCHES
W = WIDTH OF UNIT IN INCHES
H = HEIGHT OF UNIT, INCLUDING PALLET, IN INCHES
1. THE LENGTH OF A LOAD STRAP REQUIRED FOR A SPECIFIC UNIT, WHERE THE STRAP PASSES THROUGH THE STRAP SLOT, WILL BE DETERMINED BY USING THE FOLLOWING FORMULA: $L = 2W + 2H + 2$
 2. THE LENGTH OF A TIEDOWN STRAP REQUIRED FOR A SPECIFIC UNIT, WHERE THE STRAP PASSES UNDER THE PALLET DECK, WILL BE DETERMINED BY USING THE FOLLOWING FORMULA: $L = 2A + 2H + 2$
- N. PALLET UNIT LOADS SHALL BE INSPECTED FOR TORN, DETERIORATED OR LOOSENED STRAPPING PRIOR TO SHIPPING.
1. TORN OR BROKEN STRAPS SHOULD BE REPLACED OR REPAIRED BY SPLICING IN A MANNER SIMILAR TO THAT DESCRIBED IN "N.4(B)" BELOW.
 2. DETERIORATION DUE TO A MINOR AMOUNT OF RUST WILL NOT NECESSARILY BE CAUSE FOR REPLACING A STRAP. HOWEVER, AN EXTENSIVELY RUSTED/SCALED/PITTED STRAP IS CAUSE FOR REPLACING THE STRAP.
 3. A DAMAGED OR DEFECTIVE SEAL IS SUFFICIENT CAUSE FOR REPLACEMENT OF THE SEAL.
 4. LOOSE STRAPS SHOULD BE CHECKED FOR DEGREE OF LOOSENESS BY POSITIONING THE HOOK OF A SCALE (COMMONLY KNOWN AS A FISH SCALE) BEHIND THE STRAPS NEAR THE MIDPOINT AT THE TOP OR SIDE OF THE UNIT LOAD. PULL THE SCALE UNTIL A READING OF 20 POUNDS IS OBTAINED. THE DISTANCE A STRAP IS OUT OF ALIGNMENT MUST NOT EXCEED 1-1/2". IF THE MEASUREMENT EXCEEDS 1-1/2", THE STRAP MUST BE TIGHTENED OR REPLACED. SEE PAGE 11 FOR GUIDANCE. TIGHTENING CAN BE ACCOMPLISHED BY EITHER OF TWO METHODS.
 - (A) A RETENSIONING DEVICE CAN BE USED IF THE STRAP HAS AT LEAST A 6" LONG TAB AT THE SEAL. SEE GENERAL NOTE "L" ABOVE.
 - (B) AN 18" LONG PIECE OF STRAP CAN BE USED AS A SPLICE PIECE. CUT THE LOOSE STRAP ON BOTH SIDES OF THE ORIGINAL SEAL AND DISCARD THE CUT OUT SECTION. OVERLAP ONE END OF THE STRAP SPLICE PIECE TO ONE END OF THE ORIGINAL STRAPPING SO AS TO PROTRUDE SLIGHTLY BEYOND THE END OF THE SEAL TO BE USED. POSITION AND SECURE SEAL TO OVERLAPPED SECTION WITH TWO PAIR OF NOTCHES. USING A STRAPPING TOOL, TENSION AND SEAL THE LENGTHENED STRAP. THE STRAP SPLICE MAY BE CUT FROM NEW STRAP OR FROM USED STRAP, PROVIDED IT IS AT LEAST OF AS GOOD A QUALITY AS THE STRAP TO WHICH IT IS BEING SECURED.

(CONTINUED ON PAGE 3)

- 5. **CAUTION:** WHEN A STRAP IS REPLACED, SPLICED OR RETENSIONED, AND THE OTHER STRAPS ON A UNIT LOAD ARE NOT, CARE MUST BE EXERCISED TO INSURE THAT THE TENSION ON THE AFFECTED STRAP IS NEARLY THE SAME AS THAT OF THE OTHER STRAPS.
- O. COOLER NAILS MAY BE SUBSTITUTED FOR THE COMMON NAILS AS SPECIFIED WITHIN EACH APPENDIX BY APPLYING THE FOLLOWING GUIDANCE. THE NUMBER OF COOLER NAILS TO BE USED WILL BE THE NUMBER OF COMMON NAILS MULTIPLIED BY 1.2 AND ROUNDED UP TO THE NEXT WHOLE NUMBER, THE SIZE OF COOLER NAILS TO BE USED WILL BE THE SAME AS SPECIFIED FOR THE COMMON NAILS (4d, 6d, 10d, ETC), BUT WILL CONFORM TO THE SIZE AND WEIGHT TOLERANCES SPECIFIED WITHIN ASTM F1667 FOR COOLER NAILS.
- P. OUTLOADING AND STORAGE OF PALLET UNITS OF PROPELLING CHARGES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE APPLICABLE PROCEDURAL DRAWINGS AS IDENTIFIED IN THE APPENDICES FOR SPECIFIC UNITS. THESE DRAWINGS ARE AVAILABLE ON THE INTERNET AT [HTTPS://WWW3.DAC.ARMY.MIL/DET](https://www3.dac.army.mil/det). CONTACT THE DEFENSE AMMUNITION CENTER AT THE ABOVE WEB ADDRESS IF SPECIFIC STORAGE AND OUTLOADING DRAWINGS ARE NOT IDENTIFIED WITHIN A PARTICULAR APPENDIX.
- R. UNIT LOAD MARKING WILL BE ACCOMPLISHED IN ACCORDANCE WITH DAC DRAWING ACV00561.
- S. IF UNITIZING OPERATIONS ARE BEING PERFORMED IN SUPPORT OF A SHIPMENT OF ITEMS FOR TROOP USE AT A CAMP, POST OR STATION, AND, IF IN ADDITION TO FULL LAYER UNITS SPECIFIED IN GENERAL NOTE "J", A FEW LOOSE CONTAINERS ARE REQUIRED TO SATISFY THE QUANTITY REQUISITIONED, THE LOOSE CONTAINERS NEED NOT BE UNITIZED. HOWEVER, THE METHOD FOR BRACING AND STAYING OF THE LOOSE CONTAINERS WITHIN THE LOAD TO BE SHIPPED MUST COMPLY WITH METHODS SPECIFIED WITHIN THE APPLICABLE 19-48 SERIES OUTLOADING PROCEDURAL DRAWINGS.

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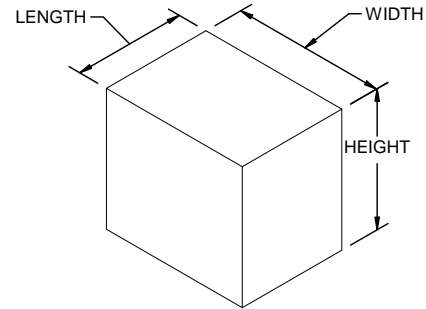
MATERIAL SPECIFICATIONS

- PALLET - - - - -: MIL-DTL-15011; 4-WAY ENTRY, STYLE 1, 1A, OR 1B, TYLE I, CLASS 1, PRESERVATIVE AND HEAT TREATED. SEE GENERAL NOTE "AA" AT RIGHT.
- LUMBER - - - - -: SEE TM 743-200-1 (DUNNAGE LUMBER) AND VOLUNTARY PRODUCT STANDARD PS 20 FOR FILLER ASSEMBLIES. ASTM D6199: CLASS 2, GROUP II, III, OR IV, PRESERVATIVE AND HEAT TREATED FOR STRAPPING BOARDS AND TOP, INTERMEDIATE, AND PALLET DUNNAGE ASSEMBLIES. NOTE: ONLY GROUP IV LUMBER IN ACCORDANCE WITH ASTM D6199 WILL BE ACCEPTABLE FOR THE CONSTRUCTION OF THE PALLET. SEE GENERAL NOTES "Y" AND "AA" AT RIGHT.
- NAILS - - - - -: ASTM F1667: COMMON STEEL NAIL (NLCM OR NLCMS). ALT: UNDER-LAYMENT NAIL (NLUL), PALLET NAIL (NLPL), OR COOLER NAIL (NLCL) OF TH SAME SIZE. SEE GENERAL NOTE "O" ABOVE.
- PLYWOOD - - - - -: COMMERCIAL ITEM DESCRIPTION A-A-55057, TYPE A, CONSTRUCTION AND INDUSTRIAL PLYWOOD, INTERIOR WITH EXTERIOR GLUE, GRADE C-D. IF SPECIFIED GRADE IS NOT AVAILABLE, A BETTER INTERIOR OR AN EXTERIOR GRADE MAY BE SUBSTITUTED.
- STRAPPING, STEEL -: ASTM D3953: FLAT STRAPPING, TYPE 1, HEAVY DUTY, FINISH B (GRADE 2), SIZE 3/4" OR 1-1/4" X .035" OR .031" OR .029". NOTE: IF EDGES DO NOTE MEET THE PREECE TEST FOR GRADE 2, ANY BRITE OR SLIT EDGES SHALL HAVE FINISH A OVERLAY APPLIED.
- SEAL, STRAP - - - -: ASTM D3953: CLASS H, FINISH B (GRADE 2), DOUBLE NOTCH TYPE, STYLE I, II, III, OR IV. ALTERNATIVE SEAL FINISH: SIGNODE OR DELTA PAINTED SEALS MAY BE USED AS AN ALTERNATIVE IF ALL SURFACES ARE PAINTED. GRI TTED BACKING IS NOT PERMITTED.

- T. CONVERSION TO METRIC EQUIVALENTS: DIMENSIONS WITHIN THIS DOCUMENT ARE EXPRESSED IN INCHES, AND WEIGHTS ARE EXPRESSED IN POUNDS. WHEN NECESSARY, THE METRIC EQUIVALENT MAY BE COMPUTED ON THE BASIS OF ONE INCH EQUALS 25.4MM AND ONE POUND EQUALS 0.454 KG..
- U. WHEN ASSEMBLING A COMPLETE PALLET UNIT, CARE SHALL BE TAKEN TO ENSURE THAT THE CONTAINERS AND DUNNAGE ASSEMBLIES OR PIECES ARE EVENLY ALIGNED SO THAT THE SIDES AND ENDS OF THE PALLET UNIT DO NOT EXCEED A 1/2" TOLERANCE, RELATIVE TO THE PALLET. SEE "UNIT ASSEMBLY TOLERANCES" DETAILS ON PAGE 11.
- V. DIMENSIONS GIVEN FOR DUNNAGE ASSEMBLIES AND THE DISTANCE BETWEEN STOP PIECES WILL BE FIELD CHECKED PRIOR TO ASSEMBLY OF DUNNAGE ASSEMBLIES. CONTAINERS MUST FIT SNUGLY IN THE DUNNAGE ASSEMBLIES. THIS GUIDANCE MUST BE APPLIED PRIOR TO BEGINNING A PALLETIZING OPERATION. ALSO, DUE TO VARIATION OF CONTAINER DIMENSIONS AND CONTAINER RING LOCATIONS, ADJUSTMENTS MAY BE REQUIRED AS TO THE LOCATION OF CROSS PIECES AND/OR OTHER PIECES ON SOME DUNNAGE ASSEMBLIES.
- W. FILLER ASSEMBLIES ARE DESIGNED SO AS TO PROVIDE LATERAL AND LONGITUDINAL BRACING WITHIN THE UNIT LOAD EQUAL TO OR GREATER THAN THE STRENGTH OF THE CONTAINER(S) BEING OMITTED FROM A LAYER. WHEN A FILLER ASSEMBLY IS REQUIRED TO BE USED WITHIN A UNIT LOAD, THE CONSTRUCTION SPECIFICATIONS AND DETAILS WILL BE PROVIDED IN THE APPLICABLE APPENDIX FOR THE ITEM TO BE UNITIZED. FOR TYPICAL FILLER ASSEMBLIES, SEE PAGES 6, 8, AND 10.
- X. IF THE 1" X 2", 2" X 2", OR 2" X 3" DUNNAGE LUMBER SPECIFIED IN THE APPENDICES IS NOT READILY AVAILABLE, TWO ACCEPTABLE SIZE DUNNAGE PIECES CAN BE MADE BY RIPPING (SAWING) A PIECE OF NOMINAL SIZE 1" X 4", 2" X 4", OR 2" X 6" LUMBER, RESPECTIVELY, ON THE CENTER LINE OF ITS WIDTH.
- Y. ALL WOODEN DUNNAGE USED IN UNIT LOADS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE PROCEDURES SPECIFIED IN MIL-DTL-2427 FOR CLEATED WOODEN BOXES. IF THE DUNNAGE CONSISTS OF MORE THAN ONE COMPONENT, IT MUST BE ASSEMBLED PRIOR TO TREATMENT. THE LETTERS PA DENOTING PQ56 (COPPER-8-QUINOLINOLATE), PB DENOTING M-GARD W550 (ZINC NAPHTHENATE EMULSIFIABLE) OR PC DENOTING M-GARD W510 OR CUNAPSOL 5 (COPPER NAPHTHENATE) MUST BE APPLIED TO THE WOOD DUNNAGE IN LETTERS AT LEAST ONE-INCH HIGH.
- Z. WHERE 3/4" UNITIZING STEEL STRAPPING IS SPECIFIED FOR USE BY AN APPENDIX THAT AUGMENTS THIS DRAWING, 1-1/4" STRAPPING MAY BE SUBSTITUTED FOR THE 3/4" STRAPPING. WHEN USING 1- 1/4" STRAPPING, 1-17/32" WIDE STRAPPING STAPLES MUST BE SUBSTITUTED FOR 15/16" WIDE STAPLES.
- AA. ALL NON-MANUFACTURED WOOD USED IN THE PALLETIZED LOAD SHALL BE HEAT TREATED AND MARKED TO SHOW CONFORMANCE TO THE INTERNATIONAL PLANT PROTECTION CONVENTION STANDARD (IPPC), ISPM-15. SEE DAC DRAWING ACV00831 FOR ISPM-15 CERTIFICATION MARKING AND PLACEMENT DETAILS.

PROVISIONS FOR LESS-THAN-FULL-LAYER UNIT LOADS

1. THE FOLLOWING PROVISIONS SET FORTH THE SPECIFICATIONS THAT MUST BE FOLLOWED IF A FILLER-TYPE ASSEMBLY IS TO BE USED TO ACHIEVE A FULL-LAYER PALLET UNIT.
 - A. FILLERS ARE DESIGNED FOR USE IN PLACE OF ONE OR MORE CONTAINERS OF A UNIT. FILLER ASSEMBLY DETAILS WILL BE DEPICTED IN THE APPENDIX APPLICABLE TO THE SPECIFIC ITEM TO BE UNITIZED. SEE GENERAL NOTE "W" ON PAGE 3.
 - B. FILLERS WILL BE POSITIONED IN THE TOP LAYER OR LAYERS OF THE CENTER STACK OR STACKS OF A UNIT LOAD AS SHOWN IN THE TYPICAL PALLET UNITS WITH FILLER ASSEMBLIES ON PAGES 6, 8, AND 10.
2. EMPTY CONTAINERS, PREFERABLY "REJECTS", CAN BE USED INSTEAD OF THE WOODEN DUNNAGE ASSEMBLIES SPECIFIED TO ACHIEVE A FULL-LAYER CONFIGURATION. WHEN EMPTY CONTAINERS ARE USED TO FILL OUT A LAYER ON A PALLET UNIT, THEY MUST BE INSTALLED IN THE MIDDLE OF THE TOP LAYER(S) OF CONTAINERS. WHEN (REJECTED) FILLER CONTAINERS ARE USED IN PLACE OF OMITTED CONTAINERS TO COMPLETE A LAYER ON A PALLET, THEY WILL BE MARKED AS SPECIFIED IN ARDEC DRAWING NO. 12982865.
3. EACH UNIT LOAD CONTAINING ONE OR MORE EMPTY CONTAINERS WILL HAVE A WEATHER RESISTANT PLACARD APPLIED TO ONE SIDE AND ONE END OF THE UNIT. THE PLACARDS WILL BE STENCILED WITH A CONTRASTING COLOR, USING LETTERS THAT ARE AS LARGE AS PRACTICAL BUT NOT LESS THAN 1/2" IN SIZE, TO READ: "THIS UNIT LOAD CONTAINS (NUMBER) EMPTY CONTAINER(S)".



SIZE CRITERIA

MAXIMUM SIZE DIMENSIONS, SEPARATELY OR IN COMBINATION, ARE 44" LONG BY 60" WIDE BY 54" HIGH. A LENGTH NOT EXCEEDING 44" WILL PERMIT 2-WIDE LOADING IN TACTICAL CARGO VEHICLES

UNITIZING PROCEDURES

- STEP 1. POSITION PALLET IN DESIRED POSITION, WITH TOP DECK BOARDS UPWARDS. POSITION PALLET DUNNAGE ASSEMBLY ON PALLET AS INDICATED AND NAIL TO THE PALLET DECK BOARDS AS SHOWN. **NOTE:** WHEN PALLET STRAP SLOTS ARE TO BE UTILIZED, NAILS MUST NOT BE DRIVEN THROUGH THE STRAP SLOTS.
- STEP 2. POSITION THE FIRST LAYER OF CONTAINERS ON THE DUNNAGE ASSEMBLY. POSITION INTERMEDIATE DUNNAGE ASSEMBLY ON TOP OF THE FIRST LAYER OF CONTAINERS. REPEAT UNTIL UNIT LOAD IS COMPLETE.
- STEP 3. AFTER PALLET IS LOADED, POSITION STRAPPING BOARDS IN PROPER ALIGNMENT WITH OTHER DUNNAGE ASSEMBLIES, OR INSTALL TOP DUNNAGE ASSEMBLY. POSITION STRAPPING AROUND UNIT, KEEPING IN VERTICAL ALIGNMENT. SEAL STRAPS WITH ONE SEAL, WITH TWO PAIR OF NOTCHES PER SEAL. INSTALL STRAP STAPLES AS INDICATED. SEALS SHALL BE PLACED SO AS TO NOT INTERFERE WITH THE STACKING OF ONE UNIT LOAD ON TOP OF ANOTHER.

NOTE 1: WHEN BUILDING PALLET UNITS, CARE MUST BE EXERCISED TO INSURE THAT DUNNAGE ASSEMBLIES, CONTAINERS, AND STRAPPING ARE IN VERTICAL ALIGNMENT. WHEN CONTAINERS ARE NOT IN VERTICAL ALIGNMENT, POOR OUTLOADING AND STORAGE PROCEDURES COULD RESULT. SEE GENERAL NOTES "J" ON PAGE 2, "U" ON PAGE 3 AND "UNIT ASSEMBLY TOLERANCES" DETAILS ON PAGE 11 FOR ALLOWABLE ALIGNMENT TOLERANCES.

NOTE 2: SPECIFIED "UNITIZING PROCEDURES" ARE BASED ON CONTAINERS THAT DO NOT HAVE A WOODEN OUTER PACK. WHEN UNITIZING CONTAINERS THAT DO HAVE A WOODEN OUTER PACK, THE PROCEDURES STATED ABOVE ARE TO BE ADJUSTED AS REQUIRED.

REVISIONS

REVISION NO. 1, DATED MAY 1985, CONSISTS OF:

1. ADDING GENERAL NOTE "Y" (PRESERVATIVE TREATMENT).
2. UPDATING DRAWING TO CONFORM TO CURRENT STANDARDS

REVISION NO. 2, DATED JULY 1986, CONSISTS OF:

ADDING GENERAL NOTE "Z" (1-1/4" STRAPPING).

REVISION NO. 3, DATED DECEMBER 1990, CONSISTS OF:

1. ADDING NAIL SPECIFICATION (ECP M9K3002).
2. UPDATING DRAWING TO CONFORM TO CURRENT STANDARDS.

REVISION NO. 4, DATED FEBRUARY 2001, CONSISTS OF:

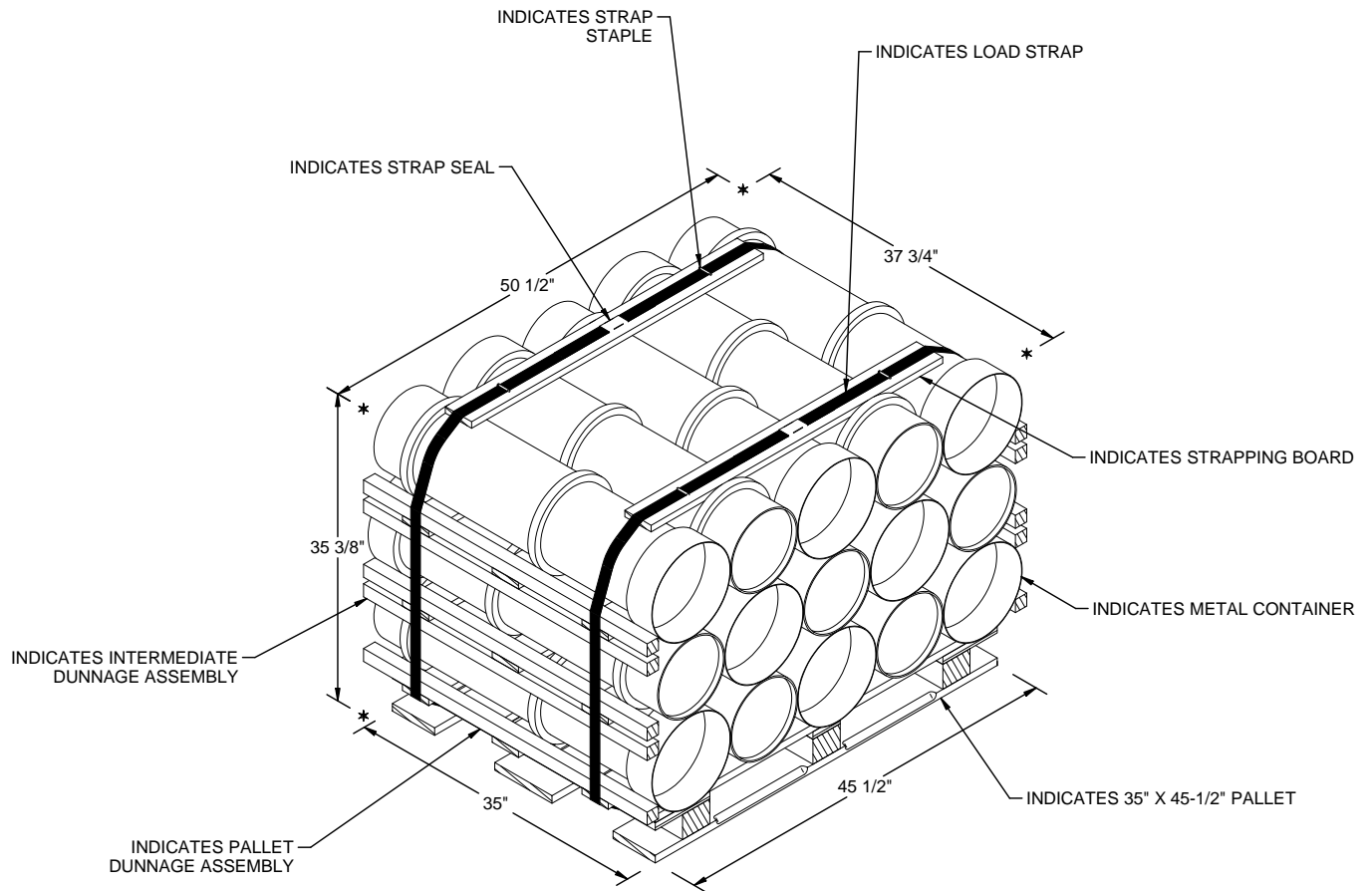
1. UPDATING GENERAL NOTES AND MATERIAL SPECIFICATIONS.
2. UPDATING DRAWING FORMAT.

REVISION NO. 5, DATED OCTOBER 2003, CONSISTS OF:

UPDATING GENERAL NOTE "AA" (HEAT TREATMENT) AND MATERIAL SPECIFICATIONS

REVISION 6, DATED JANUARY 2011, CONSISTS OF:

1. UPDATING DRAWING FORMAT.
2. UPDATING MATERIAL SPECIFICATIONS.
3. UPDATING GENERAL NOTE "P" (DAC DRAWINGS).
4. REMOVING GENERAL NOTE "Q" (STRAP CUTTER) AND ITS CONTENTS.
5. UPDATING GENERAL NOTE "AA" (HEAT TREATMENT).



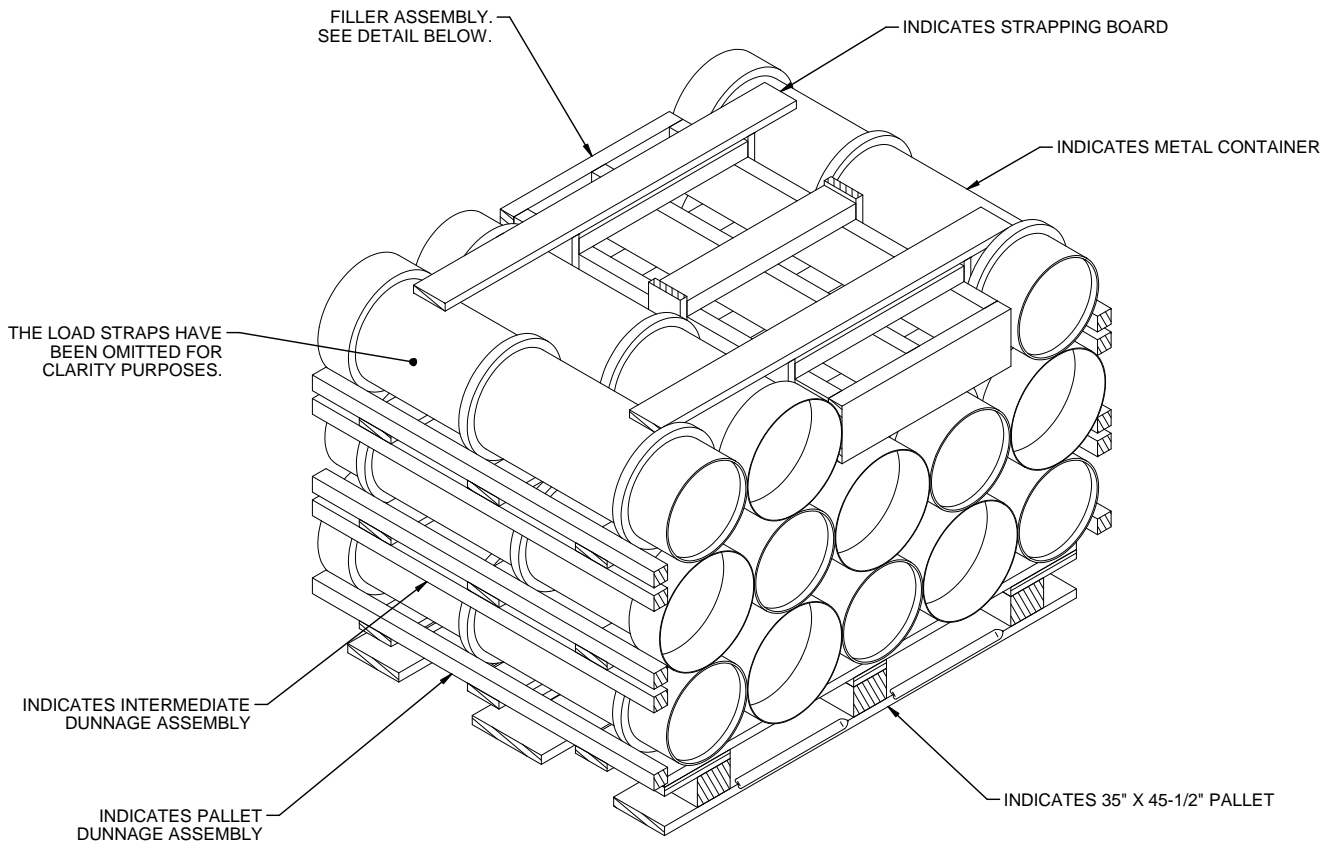
ISOMETRIC VIEW

THE PA66 SERIES CONTAINER IS DEPICTED.

SPECIAL NOTES:

1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING FLAT DUNNAGE AND ALTERNATED CONTAINERS (VERTICALLY AND Laterally). EVEN THOUGH ONLY THE PA66 SERIES CONTAINER IS DEPICTED IN THIS LOAD CONFIGURATION, ANY OTHER SERIES CONTAINER WITH A SIMILAR SIZE MAY BE UNITIZED IN THIS CONFIGURATION. SEE THE APPLICABLE APPENDIX FOR SPECIFIC UNITIZATION PROCEDURAL GUIDANCE.
2. IN ORDER TO UNITIZE CONTAINERS IN AN ALTERNATED CONFIGURATION, THE CONTAINER LENGTH MUST BE EQUAL TO OR GREATER THAN EITHER THE WIDTH OR THE LENGTH OF THE PALLET ON WHICH THE LOAD WILL BE PLACED.
3. CONSTRUCTING A UNIT LOAD OF PROPELLING CHARGES USING FLAT DUNNAGE AND ALTERNATING CONTAINERS IS THE PREFERRED METHOD FOR UNITIZING ROUND BELL CONTAINERS. HOWEVER, UNIT LOADS OF ROUND BELL CONTAINERS CAN ALSO BE CONSTRUCTED BY NOT ALTERNATING THE CONTAINERS AND USING EITHER FLAT OR ROUTED DUNNAGE. THE ALTERNATED CONTAINERS METHOD OF UNITIZATION IS NOT APPROVED FOR USE WITH SQUARE BELL CONTAINERS.

TYPICAL PALLET UNIT WITH CONTAINERS ALTERNATED

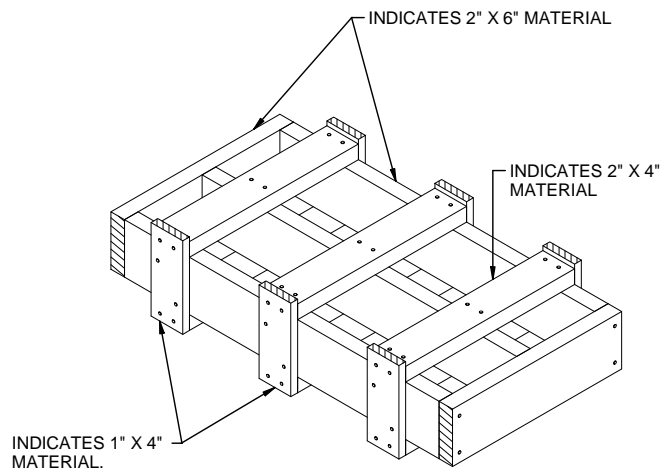


ISOMETRIC VIEW

A FILLER ASSEMBLY FOR TWO OMITTED PA66 SERIES CONTAINERS IS DEPICTED.

SPECIAL NOTES:

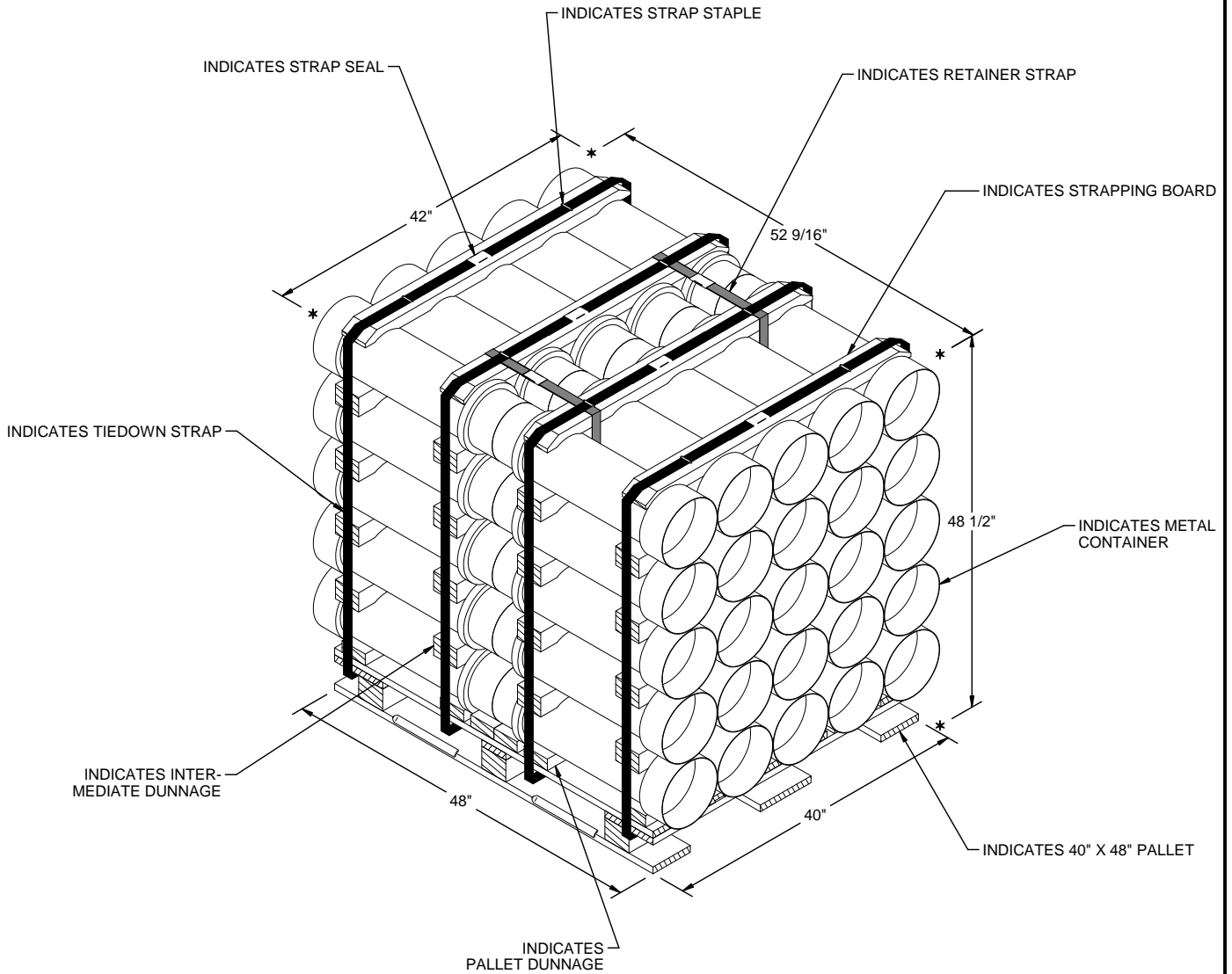
1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING FLAT DUNNAGE AND ALTERNATED CONTAINERS WITH A FILLER ASSEMBLY INSTALLED FOR TWO OMITTED PA66 SERIES CONTAINERS. SIMILAR FILLER TYPE ASSEMBLIES CAN BE INSTALLED IN UNIT LOADS CONTAINING OTHER SERIES CONTAINERS. FOR SPECIFIC GUIDANCE IN THE CONSTRUCTION OF A FILLER ASSEMBLY, SEE THE APPLICABLE APPENDIX.
2. GENERALLY, FILLER ASSEMBLIES CAN BE CONSTRUCTED FOR OMITTING ONE, TWO, THREE OR FOUR CONTAINERS, DEPENDING UPON THE LOAD CONFIGURATION. FOR OMITTING MORE THAN FOUR CONTAINERS, A COMBINATION OF FILLER ASSEMBLIES WILL BE USED. FOR UNIT LOADS CONSTRUCTED OF ONLY ONE ROW OF CONTAINERS, THE USE OF MORE THAN TWO FILLER ASSEMBLIES IS NOT PERMITTED. FOR UNIT LOADS CONSTRUCTED OF TWO ROWS OF CONTAINERS, THE USE OF MORE THAN FOUR FILLER ASSEMBLIES IS NOT PERMITTED. IF NECESSARY, A FULL LAYER OF CONTAINERS CAN BE OMITTED.
3. FILLER ASSEMBLIES WILL NOT BE INSTALLED IN THE OUTSIDE STACKS OF A UNIT LOAD. THE FILLER ASSEMBLIES WILL BE INSTALLED ONLY IN THE TOP LAYER OR LAYERS OF THE CENTER STACK OR STACKS OF A UNIT LOAD.



FILLER ASSEMBLY

A FILLER ASSEMBLY FOR TWO OMITTED PA66 SERIES CONTAINERS IS DEPICTED.

**TYPICAL PALLET UNIT WITH CONTAINERS ALTERNATED
(SHOWN WITH FILLER ASSEMBLY FOR OMITTED CONTAINERS)**

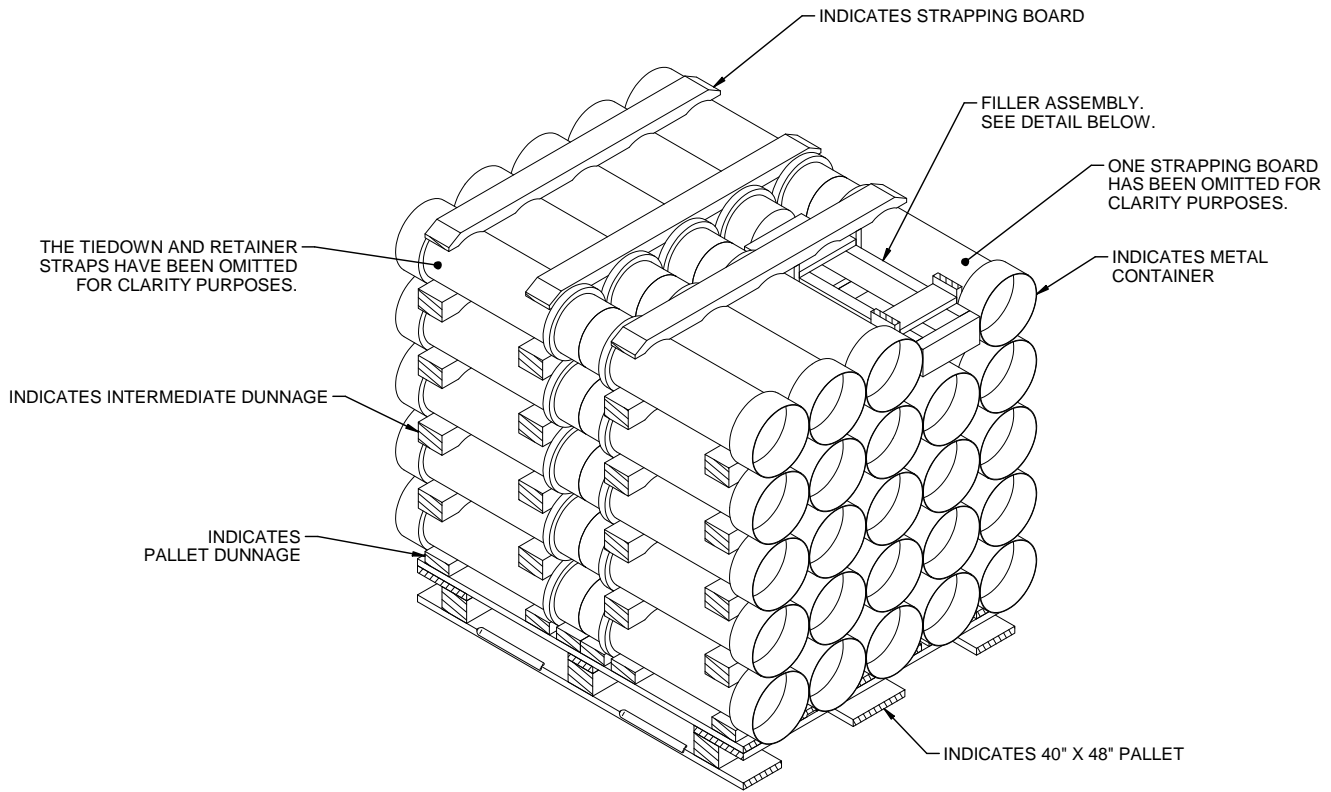


ISOMETRIC VIEW

THE M18 SERIES CONTAINER IS DEPICTED.

SPECIAL NOTES:

1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING ROUTED DUNNAGE WITH THE CONTAINERS NOT ALTERNATED. EVEN THOUGH ONLY THE M18 SERIES CONTAINER IS DEPICTED IN THIS LOAD CONFIGURATION, ANY OTHER SERIES CONTAINER WITH A SIMILAR SIZE MAY BE UNITIZED IN THIS CONFIGURATION. SEE THE APPLICABLE APPENDIX FOR SPECIFIC UNITIZATION PROCEDURAL GUIDANCE.
2. CONSTRUCTING A UNIT LOAD OF PROPELLING CHARGES USING ROUTED DUNNAGE WITH THE ROUND BELL CONTAINERS NOT ALTERNATED IS APPROVED FOR USE; HOWEVER, IT IS NOT THE PREFERRED METHOD FOR UNITIZING ROUND BELL CONTAINERS. THE ROUTED DUNNAGE METHOD OF UNITIZATION IS NOT APPROVED FOR USE WITH SQUARE BELL CONTAINERS.

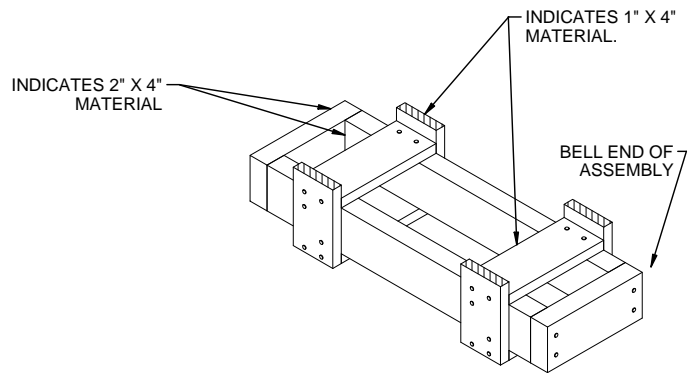


ISOMETRIC VIEW

A FILLER ASSEMBLY FOR ONE OMITTED M18 SERIES CONTAINER IS DEPECTED.

SPECIAL NOTES:

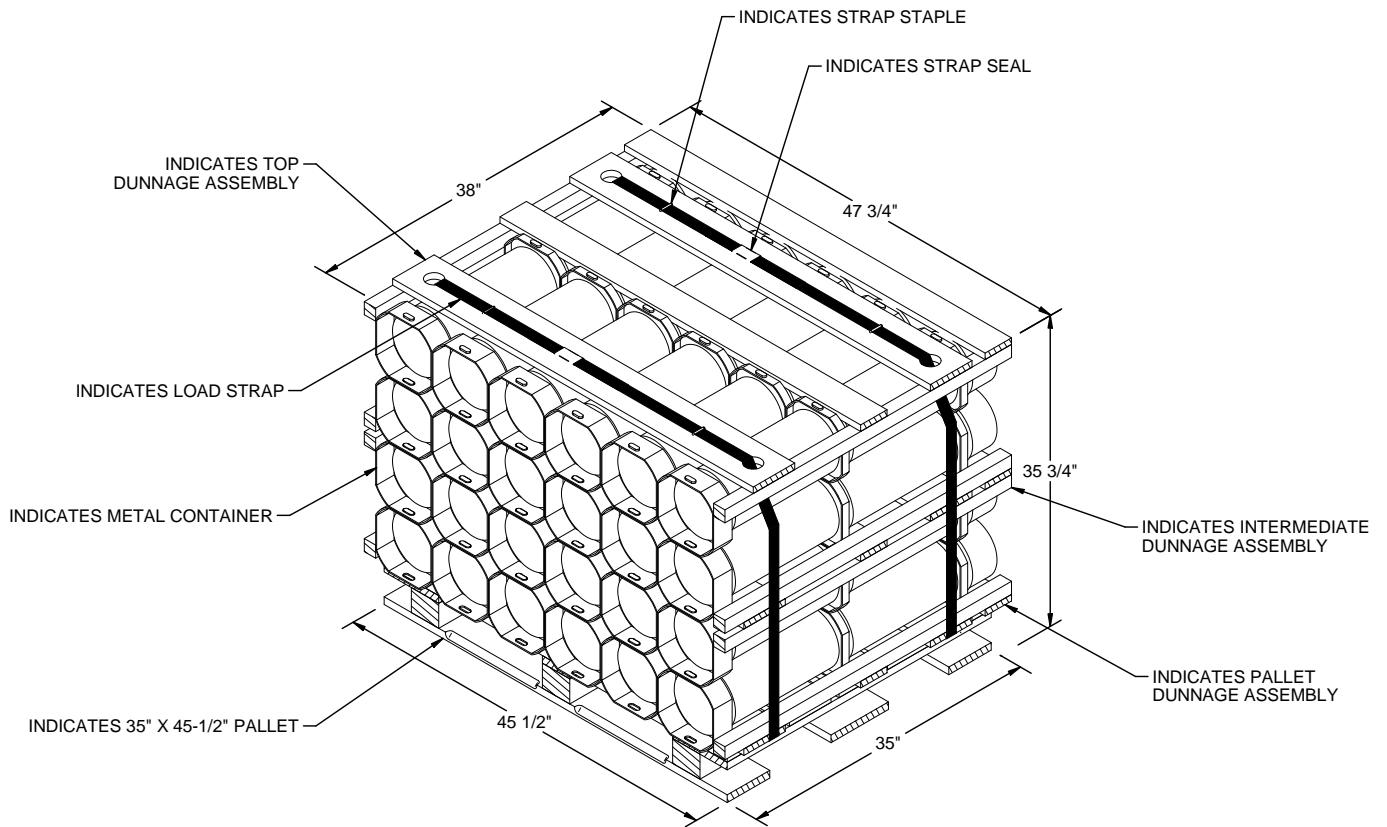
1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING ROUTED DUNNAGE WITH THE CONTAINERS NOT ALTERNATED AND A FILLER ASSEMBLY INSTALLED FOR ONE OMITTED M18 SERIES CONTAINER. SIMILAR FILLER TYPE ASSEMBLIES CAN BE INSTALLED IN UNIT LOADS CONTAINING OTHER SERIES CONTAINERS. FOR SPECIFIC GUIDANCE IN THE CONSTRUCTION OF A FILLER ASSEMBLY, SEE THE APPLICABLE APPENDIX.
2. GENERALLY, FILLER ASSEMBLIES CAN BE CONSTRUCTED FOR OMITTING ONE, TWO, THREE OR FOUR CONTAINERS, DEPENDING UPON THE LOAD CONFIGURATION. FOR OMITTING MORE THAN FOUR CONTAINERS, A COMBINATION OF FILLER ASSEMBLIES WILL BE USED. FOR UNIT LOADS CONSTRUCTED OF ONLY ONE ROW OF CONTAINERS, THE USE OF MORE THAN TWO FILLER ASSEMBLIES IS NOT PERMITTED. FOR UNIT LOADS CONSTRUCTED OF TWO ROWS OF CONTAINERS, THE USE OF MORE THAN FOUR FILLER ASSEMBLIES IS NOT PERMITTED. IF NECESSARY, A FULL LAYER OF CONTAINERS CAN BE OMITTED.
3. FILLER ASSEMBLIES WILL NOT BE INSTALLED IN THE OUTSIDE STACKS OF A UNIT LOAD. THE FILLER ASSEMBLIES WILL BE INSTALLED ONLY IN THE TOP LAYER OR LAYERS OF THE CENTER STACK OR STACKS OF A UNIT LOAD.



FILLER ASSEMBLY

A FILLER ASSEMBLY FOR ONE OMITTED M18 SERIES CONTAINER IS DEPICTED

**TYPICAL PALLET UNIT WITH CONTAINERS ON ROUTED DUNNAGE
(SHOWN WITH FILLER ASSEMBLY FOR OMITTED CONTAINER)**

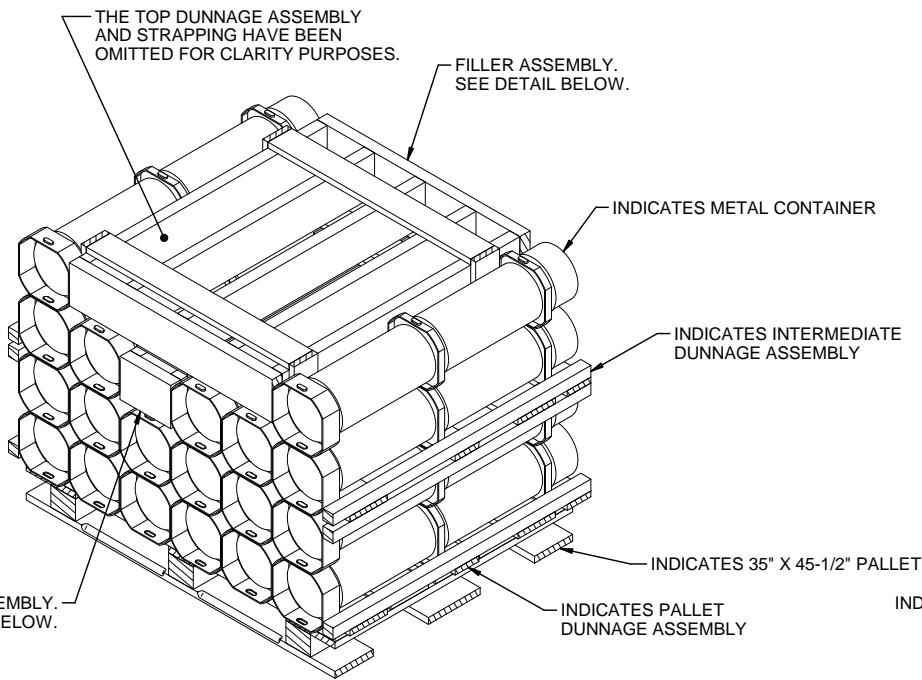


ISOMETRIC VIEW

THE PA103 CONTAINER IS DEPICTED.

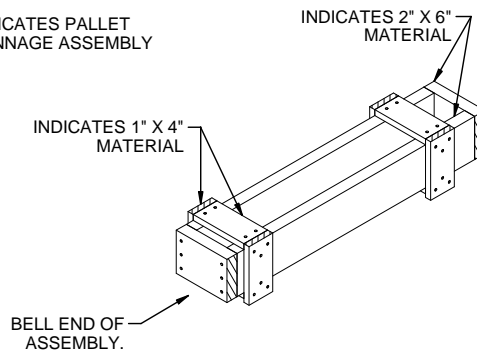
SPECIAL NOTES:

1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING FLAT DUNNAGE WITH THE CONTAINERS NOT ALTERNATED. EVEN THOUGH ONLY THE PA103 SERIES CONTAINER IS DEPICTED IN THIS LOAD CONFIGURATION, ANY OTHER SERIES CONTAINER WITH A SIMILAR SIZE MAY BE UNITIZED IN THIS CONFIGURATION. SEE THE APPLICABLE APPENDIX FOR SPECIFIC UNITIZATION PROCEDURAL GUIDANCE.
2. CONSTRUCTING A UNIT LOAD OF PROPELLING CHARGES USING FLAT DUNNAGE WITH ROUND BELL CONTAINERS NOT ALTERNATED IS APPROVED FOR USE; HOWEVER, IT IS NOT THE PREFERRED METHOD FOR UNITIZING ROUND BELL CONTAINERS. IT IS, HOWEVER, THE ONLY APPROVED METHOD FOR UNITIZING SQUARE BELL CONTAINERS.



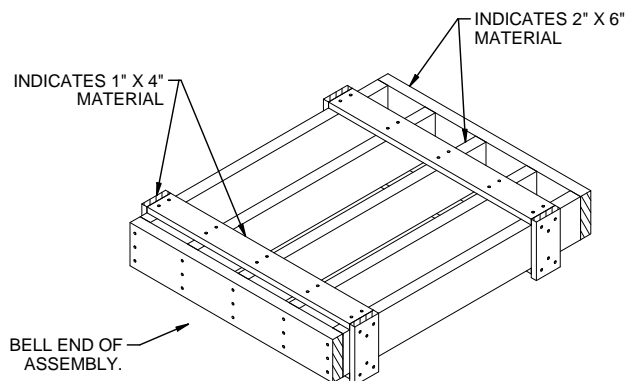
ISOMETRIC VIEW

FILLER ASSEMBLIES FOR ONE AND FOUR OMITTED PA103 SERIES CONTAINERS ARE DEPICTED.



FILLER ASSEMBLY

A FILLER ASSEMBLY FOR ONE OMITTED PA103 SERIES CONTAINER IS DEPICTED



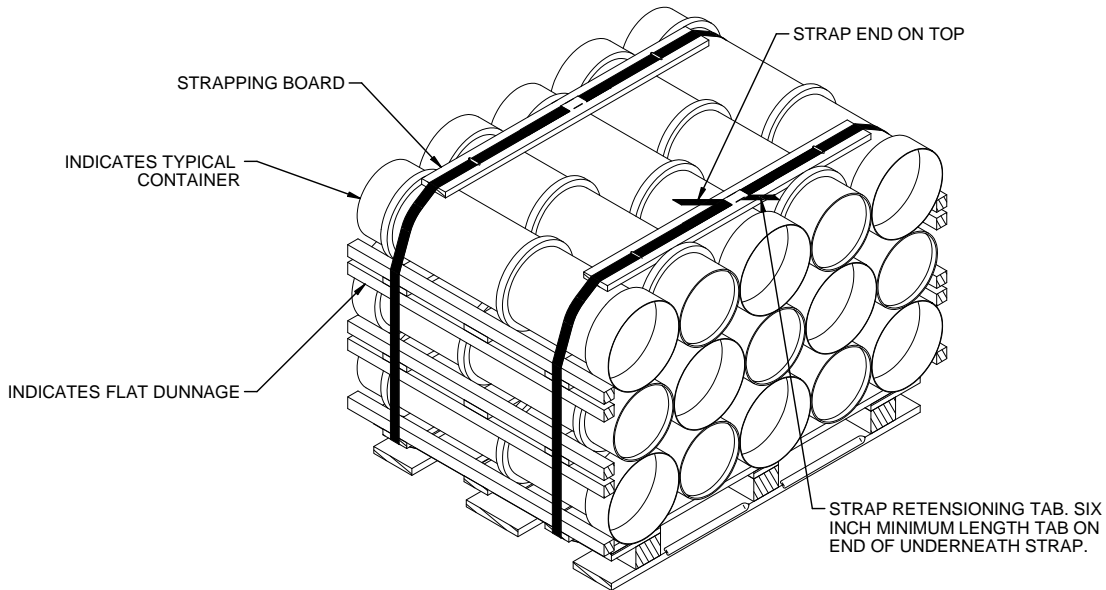
FILLER ASSEMBLY

A FILLER ASSEMBLY FOR FOUR OMITTED PA103 SERIES CONTAINERS IS DEPICTED.

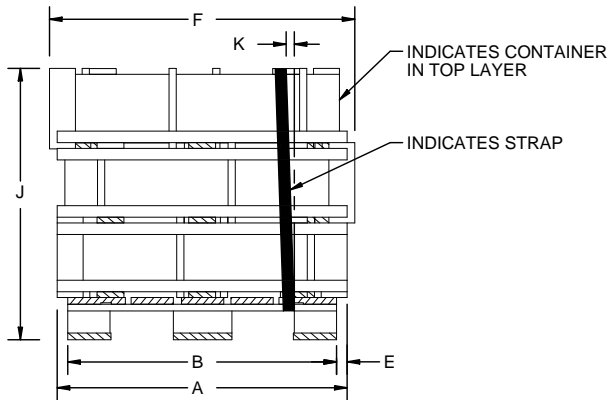
SPECIAL NOTES:

1. THE UNIT LOAD ABOVE DEPICTS A TYPICAL UNIT LOAD USING FLAT DUNNAGE WITH THE CONTAINERS NOT ALTERNATED AND TWO FILLER ASSEMBLIES INSTALLED FOR FIVE OMITTED PA103 SERIES CONTAINERS. SIMILAR FILLER TYPE ASSEMBLIES CAN BE INSTALLED IN UNIT LOADS CONTAINING OTHER SERIES CONTAINERS. FOR SPECIFIC GUIDANCE IN THE CONSTRUCTION OF A FILLER ASSEMBLY, SEE THE APPLICABLE APPENDIX.
2. GENERALLY, FILLER ASSEMBLIES CAN BE CONSTRUCTED FOR OMITTING ONE, TWO, THREE, FOUR, OR FIVE CONTAINERS, DEPENDING UPON THE LOAD CONFIGURATION. FOR OMITTING MORE THAN FIVE CONTAINERS, A COMBINATION OF FILLER ASSEMBLIES WILL BE USED. FOR UNIT LOADS CONSTRUCTED OF ONLY ONE ROW OF CONTAINERS, THE USE OF MORE THAN TWO FILLER ASSEMBLIES IS NOT PERMITTED. FOR UNIT LOADS CONSTRUCTED OF TWO ROWS OF CONTAINERS, THE USE OF MORE THAN FOUR FILLER ASSEMBLIES IS NOT PERMITTED. IF NECESSARY, A FULL LAYER OF CONTAINERS CAN BE OMITTED.
3. FILLER ASSEMBLIES WILL NOT BE INSTALLED IN THE OUTSIDE STACKS OF A UNIT LOAD. THE FILLER ASSEMBLIES WILL BE INSTALLED ONLY IN THE TOP LAYER OR LAYERS OF THE CENTER STACK OR STACKS OF A UNIT LOAD.

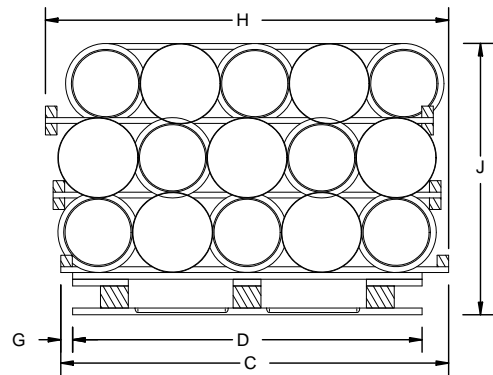
**TYPICAL PALLET UNIT WITH CONTAINERS ON FLAT DUNNAGE
(SHOWN WITH FILLER ASSEMBLIES FOR OMITTED CONTAINERS)**



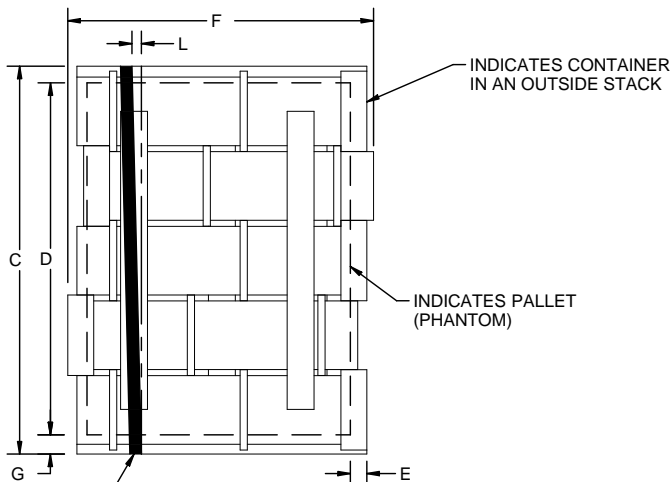
STRAP RETENSIONING TAB
SEE GENERAL NOTE "L" ON PAGE 2.



UNIT LENGTH VIEW



UNIT WIDTH VIEW



UNIT TOP VIEW

INDICATES STRAP

UNIT ASSEMBLY TOLERANCES

SPECIAL NOTES:

1. DIMENSIONS APPLICABLE TO ALLOWABLE TOLERANCES ARE EXPRESSED IN INCHES AND IDENTIFIED BY LETTERS AS FOLLOWS:

- A = UNIT LENGTH
- B = PALLET LENGTH
- C = UNIT WIDTH
- D = PALLET WIDTH
- E = (A-B)/2 WITH A PLUS OR MINUS 1/2" TOLERANCE FOR EACH LAYER AND FOR EACH STACK = LENGTHWISE OVERHANG
- F = DIMENSION "A" PLUS 1/2" MAXIMUM = ALLOWABLE UNIT LENGTH
- G = (C-D)/2 WITH A PLUS OR MINUS 1/2" TOLERANCE FOR EACH LAYER = WIDTHWISE OVERHANG
- H = DIMENSION "C" PLUS 1/2" MAXIMUM = ALLOWABLE UNIT WIDTH
- J = UNIT HEIGHT
- K = J/24 = MAXIMUM INCHES FROM TRUE ALIGNMENT (E.G., IF J=36", K=36/24=1-1/2" MAX) = VERTICAL STRAP ALIGNMENT
- L = C/24 = MAXIMUM INCHES FROM TRUE ALIGNMENT (E.G., IF C=48", L=48/24=2" MAX) = TRANSVERSE STRAP ALIGNMENT

2. CONTAINER, DUNNAGE ASSEMBLY, AND DUNNAGE PIECE ALIGNMENT TOLERANCES APPLY TO EACH LAYER AND TO EACH STACK RELATIVE TO THE PALLET DECK. SEE GENERAL NOTES "H" ON PAGE 2 AND "U" ON PAGE 3.

3. STRAPPING TOLERANCES APPLY TO ALL STRAPS AND TO ALL SURFACES WHICH EACH STRAP ENCOMPASSES; I.E., TOP, BOTTOM, AND BOTH SIDES.

