

FRAME CAPACITY CHART
FRAME LOAD IS LBS.

FRAME CLEARANCE BETWEEN BEAM LEVELS	F14	F30	F24	F20	F18	F10
48"	11,437	21,858	26,225	21,427	26,455	26,881
54"	14,522	27,872	32,281	26,787	31,881	32,307
60"	15,570	31,119	34,530	27,524	34,128	34,554
66"	13,817	28,658	32,817	26,619	31,818	32,244
72"	12,284	25,881	30,260	25,298	29,715	30,141
78"	11,232	24,187	28,123	23,914	28,418	28,844
84"	9,870	21,128	24,122	20,850	25,217	25,643
90"	8,880	19,124	21,928	18,810	23,118	23,544
96"	7,878	17,295	20,171	17,219	21,519	21,940
102"	6,877	15,595	18,798	15,719	19,920	20,341
108"	6,127	14,140	17,398	14,320	18,521	18,942

1. BASED ON 100% RAY SPECIFICATIONS FOR DISBURSING AND UTILIZATION OF STEEL STORAGE RACKS.
2. BASED ON AISC DESIGN MANUAL.
3. APPROVED FOR NON-STEEL USE ONLY.
4. CALL ESP FOR APPLICATIONS NOT COVERED BY ABOVE.

STEP BEAM CAPACITY CHART
(IN LBS. PER PAIR)

BEAM TYPE	1000	1500	2000	2400	2800	3200	3600
48"	3,114	4,596	6,078	6,715	7,352	7,989	8,626
54"	1,155	1,735	2,315	2,578	2,737	2,896	3,055
60"	1,277	1,910	2,542	2,778	2,917	3,056	3,195
66"	918	1,318	1,788	1,921	2,054	2,187	2,320
72"	717	1,018	1,383	1,501	1,619	1,737	1,855
78"	617	878	1,163	1,256	1,349	1,442	1,535
84"	517	738	963	1,036	1,109	1,182	1,255

1. BASED ON 100% RAY SPECIFICATIONS FOR DISBURSING AND UTILIZATION OF STEEL STORAGE RACKS.
2. CAPACITY NOT BASED ON UNIFORM DISTRIBUTION OF LOADS PER SHEET (PAIRS OF BEAMS).
3. BASED ON AISC DESIGN MANUAL.
4. APPROVED FOR NON-STEEL USE ONLY.
5. CALL ESP FOR APPLICATIONS NOT COVERED BY ABOVE.

A. GENERAL

- PLEASE CALL OUR OFFICE WITH ANY QUESTIONS REGARDING INSTALLATION AND USE OF YOUR PALLET RACKS.
- THIS INFORMATION SHEET IS MEANT TO ASSIST YOU AND YOUR INSTALLERS IN ASSEMBLING EXCEL STORAGE PRODUCTS RACK COMPONENTS.
- EXCEL STORAGE PRODUCTS COMPANY (ESP) DOES NOT HAVE ANY AGENTS NOR DOES IT EMPLOY ANY AGENTS. ESP SELLS RACK COMPONENTS TO CONTRACTORS OR INDIVIDUALS WHO IN TURN RESELL OR ASSEMBLE THOSE RACK COMPONENTS TO FORM A SYSTEM. RACK COMPONENTS ARE SOLD BY ESP IN THE SAME MANNER AS 2" X 4'S ARE SOLD BY A LUMBER YARD. THE ONLY REPRESENTATION WHICH ESP MAKES IS AS PER THE WARRANTY IS LISTED IN THE ESP GENERAL CATALOG, ONE OF WHICH IS AVAILABLE UPON REQUEST.
- ESP CAN PROVIDE LAYOUT, DESIGN AND INSTALLATION SERVICES UPON REQUEST. IF YOU HAVE NOT USED THESE SERVICES, YOU SHOULD:
 - HAVE THE SYSTEM DESIGNED AND AN INSTALLATION DRAWING PREPARED BY A COMPETENT INDIVIDUAL WHO IS KNOWLEDGEABLE IN THE DESIGN OF STORAGE RACKS AND THE THEORY THAT RACKS CAN BE BUILT ON BUILDING STRUCTURES. DEPENDING ON THE COMPLEXITY, A LICENSED PROFESSIONAL ENGINEER MAY BE REQUIRED.
 - HAVE PEOPLE INSTALL THE RACK COMPONENTS WHO HAVE A MINIMUM OF FIVE (5) YEARS OF COLLECTIVE EMPLOYMENT IN ASSEMBLY OF RACKS.
 - HAVE THE PROPER AMOUNTS OF INSURANCE FURNISHED TO YOU. CHECK WITH YOUR INSURANCE BROKER AS TO THE PROPER COVERAGE FOR INDIVIDUALS' CONFIDENTIAL, GENERAL LIABILITY, ETC.
 - HAVE THE RACK INSPECTED BY THE DESIGNER BEFORE LOADING IT IF THERE IS ANY QUESTION AS TO WHETHER OR NOT IT WAS INSTALLED PROPERLY. ESP CAN PROVIDE SUCH AN INSPECTION SERVICE.
- FOR STRUCTURAL RACK INSTALLATION SEE ESP INFORMATION SHEET I-188. IF SHEET I-188 HAS NOT BEEN PROVIDED, PLEASE CALL THE FACTORY AND ONE WILL BE SENT. DO NOT ATTEMPT TO INSTALL WITHOUT THESE INSTRUCTIONS.

B. PREPARATION

- FOLLOW SAFE PRACTICE AND THESE INSTRUCTIONS WHEN ASSEMBLING STORAGE RACK COMPONENTS. CONSULT WITH OSHA AND ALL OTHER FEDERAL, STATE AND LOCAL REGULATIONS, CODES AND ORDINANCES PERTAINING TO STORAGE RACKS DURING ITS ERECTION AND USE. ALSO FOLLOW ANY SPECIFIC SAFETY RULES IN EFFECT AT THE INSTALLATION SITE.
- ERECTORS SHOULD WEAR PROPER SAFETY CLOTHES AND EQUIPMENT THAT IS DEEMED NECESSARY (i.e. GLOVES, HARD HATS, GOGGLES, ETC.).
- CLEAR FLOOR AREA WHERE RACK IS TO BE INSTALLED.
- AFTER RECEIPT OF COMPONENTS, SEPARATE THEM BY MODEL NO. AND SIZE. REFER TO FIGURE 9 FOR LOCATION OF FRAME AND BEAM IDENTIFICATION MARKS. STORE ALL MATERIAL IN BLOCKED PILES.
- REFER TO THE INSTALLATION DRAWING, CHALK LINE THE FLOOR STARTING WITH THE OUTSIDE EDGE OF 1 BEAM. CHECK TO MAKE SURE THAT ALL BEAMS ARE ALIGNED TO MEET THE MINIMUM REQUIREMENTS SET FORTH BY THE MATERIAL HANDLING EQUIPMENT SUPPLIER. SPACE SHOULD HAVE BEEN ALLOWED FOR PALLET OVERHANG (USUALLY 2" BUT CAN VARY). THESE BEAMS ARE BUILT TO BE SURE ROOM HAS BEEN ALLOWED FOR SPANGLER RINGS (IF FITS). CONTINUE CHALK LINES THE ENTIRE AREA TO BE SURE THAT THERE ARE NO OBSTRUCTIONS.

C. INSTALLATION

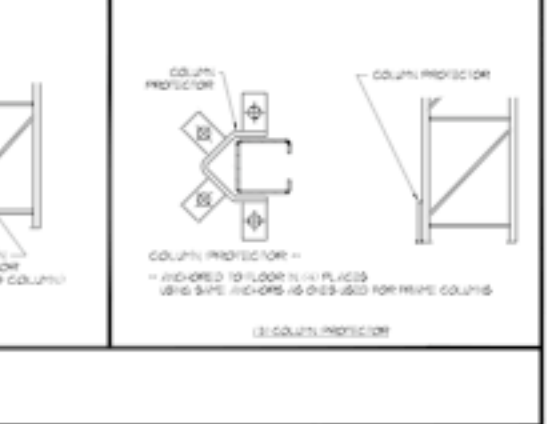
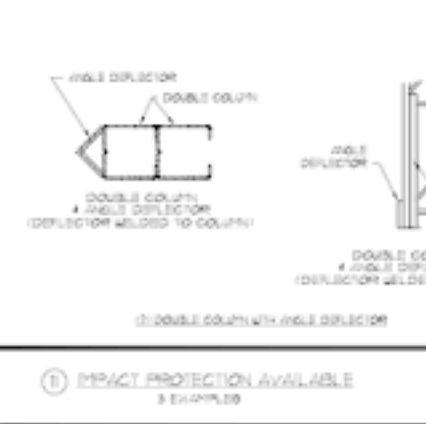
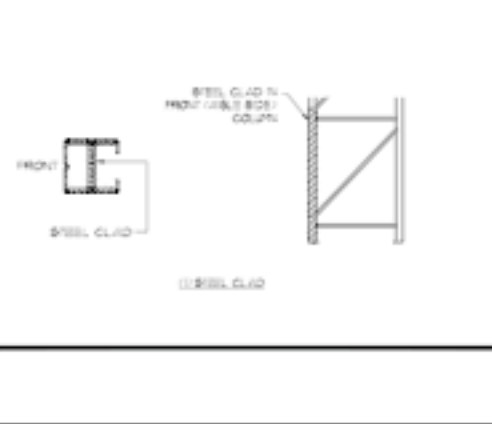
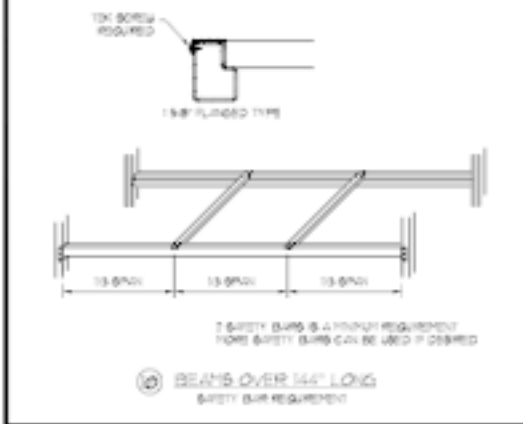
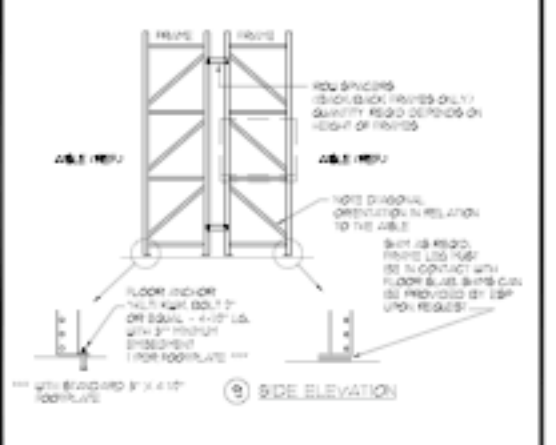
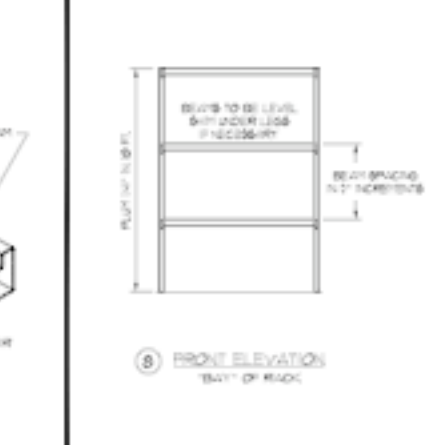
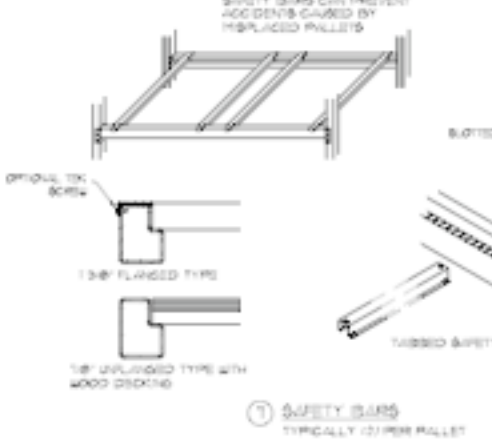
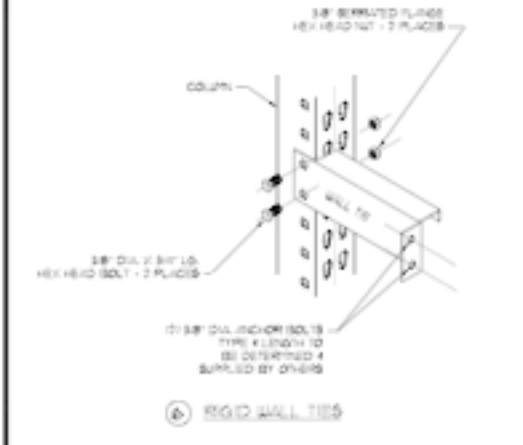
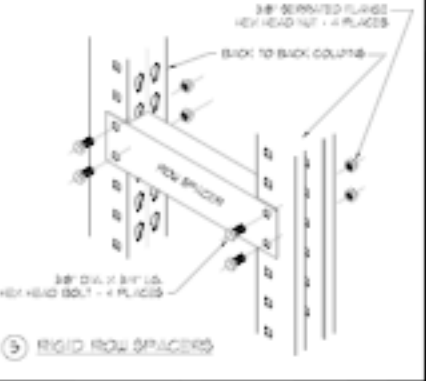
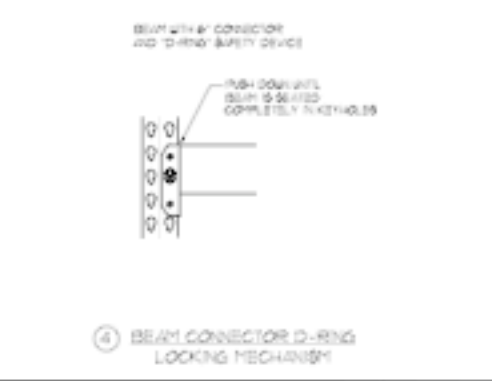
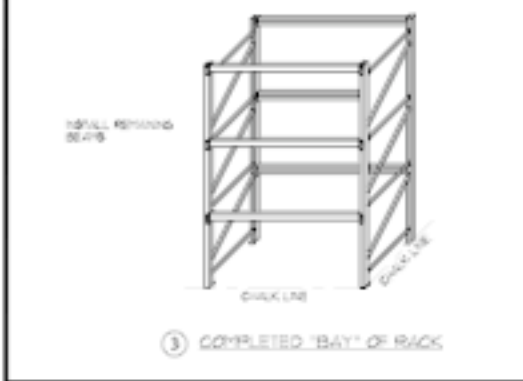
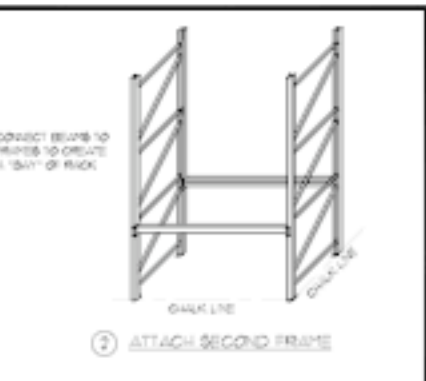
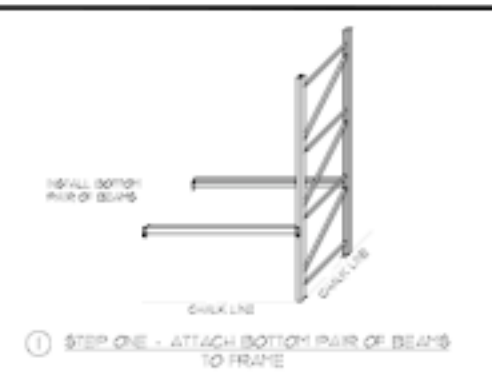
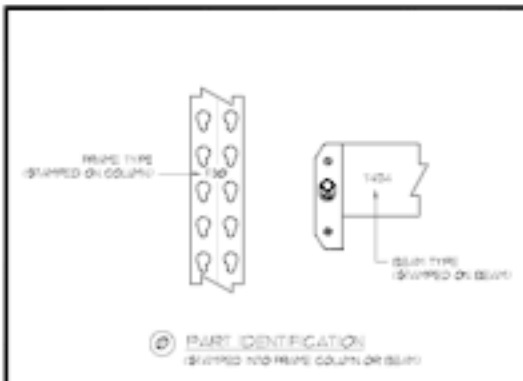
- STAND UP A FRAME ON THE CHALK LINE AND INSTALL ONE (1) PAIR OF BEAMS AS SHOWN IN FIGURE 1.
- STAND UP ANOTHER FRAME AND HOOD IN THE FREE ENDS OF THE BEAM SO THERE IS HOOD IN "BAY". SEE FIGURE 2.
- INSTALL THE REMAINDER OF THE BEAMS IN THAT BAY. SEE FIGURE 3. WHEN INSTALLING BEAMS, VISUALLY INSPECT TO MAKE CERTAIN THAT ALL BEAM HEADS ON THE BEAM CONNECTING PLATE ARE INSIDE THE FRAME LEG AND THE SAFETY "D-RING" IS PROPERLY ENGAGED IN THE KEEHOLE AS SHOWN IN FIGURE 4. A BEAM WITH A HAZARD OF MALLETS MAY BE REQUIRED TO "WALK" THE BEAM. IF THE SAFETY "D-RING" IS DAMAGED OR HAS BEEN REMOVED, THE BEAM SHOULD BE REPLACED.
- STAND UP ANOTHER FRAME AND REPEAT THE PRIOR PROCEDURE UNTIL THE ROW IS COMPLETE.
- ATTACH ROW SPACERS USING (2) 3/8" X 3/4" HEX HEAD BOLTS AND NUTS EACH. INSTALL OTHER ACCESSORIES AS SHOWN IN FIGURES 5 AND 7.
- FRAMES SHOULD BE PLUMB TO WITHIN 1/4" IN 10'. BEAMS SHOULD BE LEVEL. BEAM UNDER FOOTPLATES IF NECESSARY. NUT FRAMES TO 10' WITH ANCHOR BOLTS AS SHOWN ON THE INSTALLATION DRAWING. REFER TO FIGURE 9 FOR CORRECT ADJUSTMENT. NOTE THE DIRECTION OF THE FRAME DIAGONALS IN RELATIONSHIP TO THE AISLES.

D. SPECIAL CONDITIONS

- WHETHER THE RATIO OF THE DISTANCE TO THE TOP OF THE HIGHEST PALLET DIVIDED BY THE FRAME WIDTH EXCEEDS 2, MEASURES MUST BE TAKEN TO STABILIZE THE FRAME. THE FRAME SAULT EITHER BE TIED BACK TO ANOTHER FRAME WITH ROD ROW SPACERS OR TIED TO AN ADJACENT WALL WITH ROD WALL TIES.
- FOR BEAMS OVER 104" LONG, SPACER IN 2 - FLANGED SAFETY BARS AT THE 1/3 POINTS. SEE FIGURE 10.

E. PROPER USE

- STORAGE RACK MUST BE MAINTAINED PROPERLY TO ENSURE ITS STRUCTURAL INTEGRITY. INSPECTIONS SHOULD BE MADE PERIODICALLY. DAMAGED RACK SHOULD IMMEDIATELY BE UNLOADED AND REPAIRED OR REPLACED. FIELD REPAIRS SHOULD NOT BE MADE WITHOUT WRITTEN PERMISSION FROM ESP. ALL ACCESSORIES SHOULD REMAIN INSTALLED PROPERLY AND NOT BE DISASSEMBLED.
- FLOOR LOADS AND CONNECTIONS SHOULD BE CHECKED FOR TIGHTNESS. RETIGHTEN AS REQUIRED.
- INSTALL FORK LIFT PROTECTION IF REQUIRED. IF RACK IS BEING CRUISED BY MATERIAL HANDLING EQUIPMENT, IMPACT PROTECTION CAN PREVENT FURTHER DAMAGE. CONTACT ESP FOR PROPER MATERIAL.
- DO NOT OVERLOAD RACK. REFER TO LOAD CHARTS ON RIGHT SIDE OF THIS SHEET. INSTALL CAPACITY LABELS ON LABELS OR PLACES IN CONSPICUOUS PLACES TO ENSURE THE SAFE AND PROPER USE OF ALL COMPONENTS, PLACES AND LABELS ARE AVAILABLE FROM ESP.
- USE ONLY THE PROPER EQUIPMENT TO LOAD AND UNLOAD THE PALLET RACK. REFER TO SPECIFIC EQUIPMENT SAFETY RULES WHERE APPLICABLE.



PalletRackNow.com

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DESCRIPTION:
INSTALLATION INSTRUCTIONS AND SAFETY RULES
FOR ROLL FORMED SELECTIVE RACK

CUSTOMER:
ANY CUSTOMER

DATE: 4-26-06 BY: JAS SCALE: 1/8"=1'-0"

EXCEL
Excel Storage Products, Inc.
Phone: 888-476-1818 | Fax: 570-476-4358
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DRAWING NO.:
I-178

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