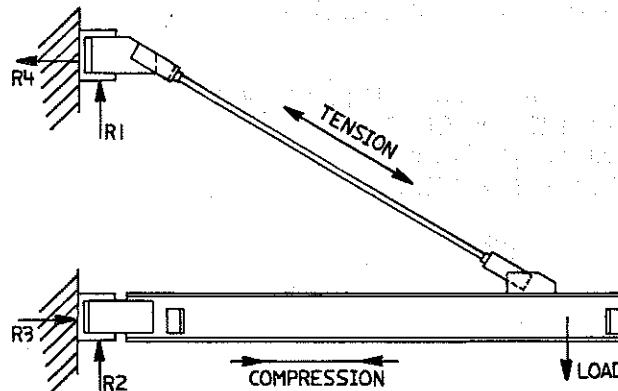




SPANCO WALL BRACKET SERIES 301

THE SPANCO WALL BRACKET JIB CRANE IS A STYLE WHICH OFFERS 200° ROTATION WITH THE ADVANTAGE OF NO SUPPORTING COMPONENTS UNDER THE BOOM. THIS ENABLES THE USER TO UTILIZE THE MAXIMUM WORK AREA, WHICH MIGHT ALSO INCLUDE WORK CLOSE TO THE EXISTING STRUCTURE. THE SPANCO WALL BRACKET STYLE JIB CRANE UTILIZES A STANDARD I-BEAM FOR THE BOOM, A TIE ROD THREADED AT BOTH ENDS. A FABRICATED BEAM BRACKET AND TWO WALL BRACKETS, ONE FOR THE TIE ROD AND ONE FOR THE BOOM. THIS DESIGN IS THE CHEAPEST STYLE OF JIB CRANE, PROVIDED OVERHEAD CLEARANCE IS NOT A LIMITING FACTOR.

NOTE: JIB CRANES SHOULD NEVER BE HUNG FROM ANY EXISTING BUILDING STRUCTURE WITHOUT FIRST CONSULTING AN ARCHITECT OR STRUCTURAL ENGINEER THE RESPONSIBILITY FOR DETERMINING IF THE EXISTING STRUCTURE OR SUPPORT TO BE USED IS ADEQUATE, RESTS ENTIRELY WITH THE CUSTOMER.



DEVELOPED FORCES ON JIB CRANE

THE FORCES DRAWN IN THE ABOVE ILLUSTRATION SHOW THE RELATIVE POSITION AND DIRECTION OF THE FORCES NEEDED TO OPPOSE THE FORCES CREATED BY THE LOAD. WHEN THE LOAD IS APPLIED, THE BOTTOM OF THE BOOM IS IN COMPRESSION, THE TIE ROD AND BRACKETS CONNECTED TO IT ARE IN TENSION. THE BOTTOM AND TOP WALL BRACKETS EXPERIENCE A THRUST AND PULL ACTION RESPECTIVELY DUE TO THE MOMENT CREATED BY THE LOAD.

DESIGN FEATURES:

- SPANCO TOP AND BOTTOM WALL BRACKETS
- BEAM BRACKET ASSEMBLY
- TIE ROD
- OPTIONAL WALL BRACKET KITS

TOP AND BOTTOM WALL BRACKET ASSEMBLIES:

1. THE TOP WALL BRACKET UTILIZES A. A FORMED STEEL CHANNEL, B. TOP PIVOT WITH TWO BRONZE BUSHINGS, AND C. FORMED TIE ROD CLEVIS.
 - A. THE FORMED CHANNEL IS UTILIZED FOR THE CONNECTION TO THE EXISTING COLUMN OR TRUSS.
 - B. THE TOP PIVOT CONSISTS OF A STEEL TUBE WITH A WRAPPED AROUND STEEL BRACKET ARRANGEMENT ALONG WITH TWO BRONZE BUSHINGS PRESS FIT INTO THE TUBE. ALSO, A GREASE FITTING IS PROVIDED TO ASSURE PROPER LUBRICATION.
 - C. THE TIE ROD CLEVIS CONSISTS OF TWO FORMED STEEL ANGLES AND IS ATTACHED TO THE TOP OF THE TIE ROD AND INCLUDES AN ADJUSTMENT NUT, THE OTHER END OF THE COMPONENT IS ATTACHED BY A BOLT IN DOUBLE SHEAR TO THE TOP PIVOT ARRANGEMENT.
2. THE BOTTOM WALL BRACKET IS A SIMILAR DESIGN TO THE TOP WALL BRACKET BY UTILIZING THE SAME FORMED CHANNEL. THE BOTTOM PIVOT IS CONSTRUCTED WITH A STEEL TUBE WITH BRONZE BUSHINGS PRESS FIT INTO THE TUBE ALONG WITH A GREASE FITTING. THE BOTTOM PIVOT HAS PLATES WELDED TO THE SIDE OF THE TUBE WITH SUFFICIENT ROOM TO SLIDE THE WEB OF THE BEAM INTO IT TO FORM A BOLTED CONNECTION.



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DESIGN ADVANTAGES:

ALL BOLTED CONNECTIONS ARE IN DOUBLE SHEAR. ALL SWIVEL CONNECTIONS UTILIZE BRONZE BUSHINGS AND GREASE FITTINGS TO ASSURE EASE OF ROTATION AND LONG LIFE AS WELL AS LOW MAINTENANCE.

BEAM BRACKET ASSEMBLY:

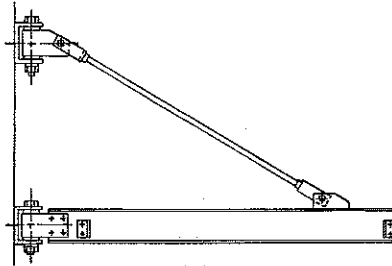
THE BEAM BRACKET ASSEMBLY CONSISTS OF A FORMED CHANNEL AND A FORMED TIE ROD CLEVIS. THE FORMED CHANNEL IS BOLTED TO THE FLANGE OF THE I-BEAM, THE TIE ROD CLEVIS IS CONNECTED TO THE BOTTOM OF THE TIE ROD AND ALSO CONNECTED TO THE FORMED CHANNEL BY A BOLT.

DESIGN ADVANTAGES:

THE BOLTED CONNECTION IS IN DOUBLE SHEAR. THE TIE ROD IS CONNECTED TO THE CLEVIS TO ENABLE ADJUSTMENT BY UTILIZING AN ADJUSTMENT NUT.

TIE RODS:

THE SPANCO WALL BRACKET JIB CRANE UTILIZES ONE TIE ROD. THE TIE ROD PROVIDES EASE IN LEVELING THE BOOM. A SINGLE TIE ROD CENTERED PROPERLY ASSURES THE BEAM WILL BE LOADED EVENLY. TWO TIE RODS CAN CREATE OFF-CENTER LOADING IF BOTH RODS ARE NOT PROPERLY LEVELLED. THE SPANCO DESIGN ELIMINATES THIS POTENTIAL PROBLEM.



WALL BRACKET JIB CRANE (STYLE 301) STANDARD EQUIPMENT SPECIFICATIONS

DESIGN FACTORS: THE STANDARD CAPACITY RATED LOAD OF THE JIB CRANE REPRESENTS THE NET RATED LOAD AT THE HOOK OF A HOIST WITH THE SAME CAPACITY RATING AS THE CRANE, WITH A DESIGN FACTOR. THIS DESIGN FACTOR FOR STRESSES IN THE CRANE IS BASED ON THE CAPACITY PLUS 25% OF THE RATED LOAD FOR IMPACT AND 15% OF THE RATED LOAD FOR THE WEIGHT OF THE HOIST AND TROLLEY. THIS WAS UTILIZED ALONG WITH THE ALLOWABLE STRESS OF THE MATERIAL TO DETERMINE THE TYPE OF DESIGN. THIS DESIGN PROVIDES FOR A MARGIN TO ALLOW FOR VARIATIONS IN THE PROPERTIES OF MATERIAL, OPERATING CONDITIONS, AND DESIGN ASSUMPTIONS.

NOTE: NO CRANE SHOULD EVER, UNDER ANY CONDITION, BE LOADED BEYOND ITS RATED CAPACITY.

I-BEAM: THE BOOM OR I-BEAM IS DESIGNED TO MEET ALL SPECIFICATIONS UTILIZING THE FACTOR OF 25% OF RATED LOAD FOR IMPACT AND 15% OF RATED LOAD FOR HOIST AND TROLLEY WEIGHT. THIS FACTOR (CAPACITY X 1.4) WAS USED TO DETERMINE THE STRESSES. 15% OF CAPACITY (CAPACITY X 1.15) WAS UTILIZED TO CALCULATE DEFLECTION.

TIE RODS: EACH BOOM IS SUPPORTED BY A SINGLE TIE ROD. THE TIE ROD IS DESIGNED IN THE SAME MANNER AS DESCRIBED ABOVE AND IS IN TENSION.

BRACKETS: EACH BRACKET IS CONSTRUCTED OF FORMED STEEL. ALL COMPONENTS ARE IN DOUBLE SHEAR, INCLUDING THE BOLTS. ALL ROTATING BRACKETS CONTAIN BRONZE BUSHINGS AND GREASE FITTINGS.

BEARINGS: THE RADIAL LOAD BEARINGS (TOP OF BRACKET) ARE OF S.A.E. 600 BRONZE WITH PRESSURE GREASE LUBRICATION. THE THRUST BEARING IS OIL IMPREGNATED SELF-LUBRICATING OILITE BRONZE.

PAINTING: THE JIB CRANE WILL BE PAINTED WITH ONE COAT OF SPANCO YELLOW, FAST DRYING ENAMEL PAINT.

CONSTRUCTION, MAINTENANCE AND OPERATION: THE PROPER CONSTRUCTION PROCEDURE, LIST AND TYPE OF PARTS AND MAINTENANCE INSTRUCTIONS ARE FURNISHED WITH PURCHASE OF JIB CRANE.

WARNING NOTE: THIS EQUIPMENT IS NOT, IN ANY WAY, DESIGNED FOR LIFTING, SUPPORTING, OR TRANSPORTATION OF HUMANS. FAILURE TO FOLLOW THE SPECIFIED LIMITATIONS CAN RESULT IN SERIOUS BODILY INJURY AND PROPERTY DAMAGE.



301 WALL BRACKET KITS

CUSTOMERS CAN MAKE THEIR OWN WALL MOUNTED JIB CRANE BY ORDERING SPANCO WALL BRACKET KITS. THESE KITS INCLUDE THE SAME COMPONENTS AS THE COMPLETE CRANES WITH THE EXCEPTION OF THE I-BEAM, TIE ROD, GRADE 5 OR A-325 MOUNTING BOLTS AND ASSEMBLY HARDWARE WHICH CAN BE PURCHASED LOCALLY. AGAIN, WE MUST REITERATE THAT THE CUSTOMER ASSUMES SOLE RESPONSIBILITY FOR ENSURING THAT THE STRUCTURE TO WHICH THE JIB CRANE IS TO BE MOUNTED IS CAPABLE OF BEARING THE STRESSES EXERTED BY THE CRANE. A QUALIFIED ARCHITECT OR STRUCTURAL ENGINEER SHOULD ALWAYS BE CONSULTED BEFORE ATTACHING ANY JIB CRANE TO AN EXISTING STRUCTURE.

ASSEMBLY OF KITS:

WHEN ASSEMBLING A SPANCO WALL BRACKET JIB CRANE, THE DIMENSIONS BETWEEN BRACKETS MUST BE HELD TO THAT GIVEN IN THE TABLES OF THE MODEL 301 JIB CRANES. SPANCO IS NOT RESPONSIBLE FOR ANY VARIATIONS, MISUSE, OVERLOADS, OR INCORRECT INSTALLATION OF THESE CRANES.

