



Catalog
No. 08C



CONSTANT SUPPORTS

CARPENTER & PATERSON, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS

1. PRICES & DESIGNS: Prices and designs are subject to change without notice. All prices are F.O.B. point of shipment, unless otherwise stated.

2. DELIVERY: Seller will make every effort to complete delivery of products as indicted on seller's acceptance of an order, but seller assumes no responsibility or liability, and will accept no backcharge for loss or damage due to delay or inability to deliver caused by acts of God, war, labor difficulties, accident, delays of carriers, contractors or suppliers, inability to obtain materials, shortages of fuel and energy, or and other causes of any kind beyond the control of seller. Under no circumstances shall seller be liable for any special or consequential damages or for loss, damage, or expenses directly or indirectly arising from delays or failure to give notice of delay.

3. SHIPMENTS: All products shipped will be carefully examined, counted, and packed. No claim for shortages will be allowed unless made in writing within ten (10) days of receipt of shipment. Claims for products damaged or lost in transit should be made on the carrier as seller's responsibility ceases and the title passes on delivery to the carrier.

4. FREIGHT: All prices are F.O.B. point of shipment. On shipments weighing 2000 pounds or more, rail freight or motor freight at the lowest published rate is allowed to all US rail points or all US highway points listed in published tariffs (Hawaii and Alaska excluded).

5. RETURNS: Seller cannot accept the return of any product unless its written permission has been first obtained. Credit will be allowed on the basis of the price charged for the merchandise less a standard handling charge of twenty percent (20%) and less any freight charges allowed or paid by seller. Material not in first class salable condition will be subject to the total cost of reconditioning. Special or non-standard products are not subject to cancellation or return except on such terms as seller may specify upon application.

6. PRODUCT APPLICATION: Seller's products are indented for installation and service as illustrated or described in seller's catalog. Seller shall not be responsible for any losses or damage sustained by the buyer or any other person as a result of misapplication.

Buyer shall defend, indemnify and save seller harmless from any and all liability or alleged liability, expenses, including legal fees arising from personal injuries including death or damage to property caused by reason of improper and/or negligent installation of pipe hangers designed and fabricated by seller.

In accordance with our product development program, we reserve the right to revise the design and application of our products without notification. For latest product information, please contact the nearest Carpenter & Paterson office.

7. WARRANTY: Carpenter & Paterson, Inc. warrants for one (1) year from date of shipment that all products of Carpenter & Paterson manufacture will be free from defects in material and workmanship when used for the purpose which Carpenter & Paterson recommends. Carpenter & Paterson warrants the products which it sells of other manufacturers only to the extent they are warranted to Carpenter & Paterson by the supplier. Claim for breach of the above warranty must be made within thirty (30) days from the date the material was determined by the Buyer to be defective or in any event within twelve (12) months from the date of delivery to the original users, unless otherwise stated. If Carpenter & Paterson deems to its satisfaction that the products are defective, the product will be repaired or replaced by Carpenter & Paterson, and no other charge will be allowed for labor or expense in repairing or replacing said product by the Buyer. In any event the amount of any adjustment shall not exceed the net sales price of the defective product. Where engineering design or fabrication work is supplied, Buyer's acceptance of Seller's design or delivery of work, shall relieve Carpenter & Paterson of all further obligation other than as expressed in Carpenter & Paterson's product warranty. The foregoing constitutes the Purchaser's sole and exclusive remedy under Carpenter & Paterson warranty. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS OR FITNESS FOR A PARTICULAR PURPOSE. CARPENTER & PATERSON MAKES NO WARRANTY OF MECHANABILITY. IN NO EVENT AND UNDER NO CIRCUMSTANCES WILL CARPENTER & PATERSON BE LIABLE FOR PERSONAL INJURY OR PROPERTY DAMAGE ARISING IN ANY MANNER OUT OF THE USE OR APPLICATION OF THE GOODS WHICH ARE THE SUBJECT OF THIS PROPOSAL. UNDER NO CIRCUMSTANCES AND IN NO EVENT WILL CARPENTER & PATERSON BE LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES WHETHER FOR BREACH OF CONTRACT OR WARRANTY, NEGLIGENCE, OR ANY OTHER TORTIOUS ACT OR OMISSION.

The terms of this warranty can be modified or changed only by authorization in writing by an officer of Carpenter & Paterson, Inc. Carpenter & Paterson neither assumes, nor authorizes any person to assume for it any obligation in connection with the sale of its products or parts of products which have been; repaired or altered outside of Sellers factory; subject to misuse, negligence, or accidents; or used in a manner contrary to the Seller's instructions or recommendations. Seller shall not be responsible for design errors due to inaccurate or incomplete information supplied by the Buyer, or its representative. Carpenter & Paterson, Inc. reserves the right to revise product design without notification.

8. TAXES: The amount of taxes applicable to the sale of material or services shall be added to the purchase price and shall be paid by buyer unless buyer provides seller with an exemption certificate acceptable to the taxing authorities.

9. PRICING INFORMATION: Orders Of any size will be accepted. However, orders less than \$150.00 will be subject to a \$25.00 Handling Charge in addition to the cost of the material and freight, if any. Prices are subject to change without notice. We are not responsible for typographical errors.

10. TERMS: Net thirty (30) days; 1-1/2% per month service charge (18% per annum) will be charged on all delinquent accounts plus court costs and attorney fees.

CONSTANT SUPPORTS

Our constant spring hanger incorporates a design that generates a constant supporting force throughout its total travel range. The design, using a compression spring, a lever, and a spring tension rod, creates a moment counterbalancing about the main pivot pin.

This concept utilizes the principle of a varying leverage about a main pivot that compensates for the varying spring force as the lever travels from the high to the low point or from the low to the high point.

The formula $F \times A = R \times B$, can be used to illustrate this concept.

F = Spring Force

A = Length of the Moment Arm from the Spring Rod to the Main pivot

R = Supporting Force (Pipe Load)

B = Length of the Moment Arm of the Supporting Force to the Main Pivot

Constant spring hangers are used on systems where there are large vertical thermal movements, critical stress conditions, or a combination of both. Constant spring hangers are also used at locations to avoid transfer of load from support to support, or to connecting equipment, such as, boiler nozzle or duct-work connections.

FEATURES

- * The geometric design provides constancy of support effort throughout the full range of travel and load adjustment.
- * The design provides a compact and more versatile unit
- * Provides a wide range of load and travel capacities
- * Each constant is individually calibrated at the factory to match the specified load, and pre-set to the Cold load setting before shipment.
- * A minimum of 10% plus or minus of load adjustment from the specified load is provided
- * White arrows marked "C" indicates cold setting of constant; Red arrows marked "H" indicates the hot or operating condition
- * Field load adjustment is made by turning the single load adjustment bolt

- * Heavy gauge spring cover provides protection and good appearance
- * Load Rod swings at least 4 degrees in all directions from vertical
- * Non-resonant to all vertical vibrations
- * Stainless steel nameplate
- * Standard shop primer paint

CONSTRUCTION

All constant hangers are manufactured in conformance with Federal Specifications WW-H-171D (Types 52, 58, 59), Manufacturers Standardization Society MSS-SP-58, MSS-SP-69 (Types 54,55, 56).

Quality material and workmanship assures a quality product with the ability to withstand moderate temporary overload and shock conditions. All pivot points are equipped with lifetime lubricated low friction bushings.

SIZE RANGES

Constant supports are made in two basic designs, the 880V (vertical design) and the 881H (horizontal design).

Both, the figure No. 880V and 881H are available to accommodate total travels from 1 1/2" to 20" and loads from 27# to 87,500#. Refer to load tables for travel and loads, pages 8-15.

The 881H - Type U Upthrust will accommodate total travels from 1 1/2" to 12" and loads from 30# to 27,195#. Refer to load tables for travel and loads, pages 42-43.

TRAVELSTOPS AND HYDROSTOPS

Constant hangers are equipped with built-in upper and lower stops to prevent excessive travel beyond the specified range. A 10 position hydrostop is also provided, painted red, that is used for hydrostatic testing, and presetting to the Cold load.

It is important to remember that the hydrostop be removed after hydro. The constant hanger will function only when the hydrostops are removed. The hydrostops are capable of supporting test loads equal to two times operating loads. An instruction tag marked "ATTENTION" contains removal and storage instructions of the hydrostop and is attached to the spring cover. (See Page 3 for illustration)

INSTALLATION AND SETTING

Constant hangers can be easily installed. Various types of connections are shown on pages 4 to 7 that will accommodate different field applications.

- (1) The installer must install the constant hanger to the structure where the load rod is directly over the desired point of attachment in the operating position.
- (2) During installation check to see that the moving parts of the hanger do not interfere with other structure or equipment.
- (3) Attach the load rod to the turnbuckle or load coupling and adjust until it has tension. At this point you should have full thread engagement.
- (4) After hydrostatic testing is completed, a minor adjustment by turning the turnbuckle or load coupling will load the load rod allowing the removal of the hydrostops. The hydrostops must be removed for the constant to function. Adjust the turnbuckle or load coupling until the position indicator aligns with the cold position marker. Store the hydrostops by securing them to the unit.
- (5) At operating condition, check the indicator position which should be at the "Hot" setting, if necessary, adjust the hanger to the "Hot" setting.

NOTE: (1) If the piping system is insulated all insulation should be installed before final adjustment. (2) If piping system is conveying liquids the liquid should be present before final adjustment.

- (6) If the system is to be re-hydroed, or the unit is to be removed, the hydrostops must be re-installed. Turning the turnbuckle or load coupling will move the position indicator to align the pin with one of the holes in the hydrostop and allow bolting the hydrostop onto the frame plate.

TRAVEL INDICATORS

The position indicator is on both sides of the hanger frame beside the position scale. The indicator must be at some location within the total travel range, under all operating conditions. For upward movement of the pipe from Cold to Hot, the hanger rod should be adjusted so that the position indicator is near the bottom of the travel range at the Cold position. For downward movement of the pipe from Cold to Hot, the hanger rod should be adjusted so that the position indicator is near the top of the travel range at the Cold position.

FIELD LOAD ADJUSTMENT

Each constant hanger is calibrated and set to the load specified on the nameplate and marked on the load adjustment scale. A lead seal is placed in the load adjustment bolt to prevent tampering. Field load adjustment is not advised since this could jeopardize the design engineers load calculations.

If the actual load is different from design load because of changes made such as: installing different pipe components with different weights or a change in hanger location, the constant can be adjusted at least plus or minus 10% of the designed load. For example if the hanger is designed for 3000# the hanger may be adjusted from 2700# to 3300# pounds.

To make the load adjustment first remove the lead seal and verify location of the mark on the load scale. Each increment on the load scale represents 2% of adjustment. The load scale indicates which direction increases or decreases the load. Turn the load adjustment bolt in the direction desired and the number of increments needed.

SELECTING HANGERS

- (1) Select size - On pages 8 to 15 a chart is given to guide in choosing the proper size hanger. Before using the chart, two things must be established.

(a) Determine actual travel that the constant will be supporting.

(b) Determine the total load that the hanger will be supporting. (Include installation and associated hardware below the constant)

After determining actual travel, determine the total travel by calculating actual travel plus your required overtravel, usually 20% of the actual travel. The percentage of overtravel is usually never less than 1 inch. For example, actual travel of 1 inch, the total travel will be 2 inches. For 7 inches of actual travel, total travel will be 8 1/2 inches.

After determining the total travel, go to the chart and find the column that has the total travel needed. Next, go down the column until the load needed to be supported is equal to or greater than the load shown. The corresponding size will be the size required. For example, 4 inches of total travel, and 2750 pounds will be a size 34 (see load tables pages 8-15).

SELECTION OF TYPE AND FIGURE

(1) After determining the size, the next step is selecting the style of hanger that will work the best for the site requirement, which can be either a vertical 880V series pages 16 to 31 or horizontal 881H series pages 32 to 48.

(2) After determining the style, a decision must be made as to the type of hanger which best suits space and structural requirements.

Types A, B, C, D, and E are available in 880V and 881H series.

Types F and G are available in 880V series only.

Type U is available in 881H only.

Pages 4 through 5 illustrates the different applications that can be accommodated.

SPECIAL HANGERS

The following pages and illustrations illustrates several options available to fit our customer's needs. However, if an unusual design problem exists, our engineers will be delighted to help find a solution to the problem.

Additional features to all standard units are as follows:

- (a) galvanized and stainless steel components with neoprene coated coils for corrosion resistance.
- (b) special paint applications.
- (c) special materials
- (d) special long travels not shown in catalog.
- (e) special gap turnbuckles or load couplings.
- (f) alternate top connections.
- (g) lifting lugs pages 6 and 7

ORDERING

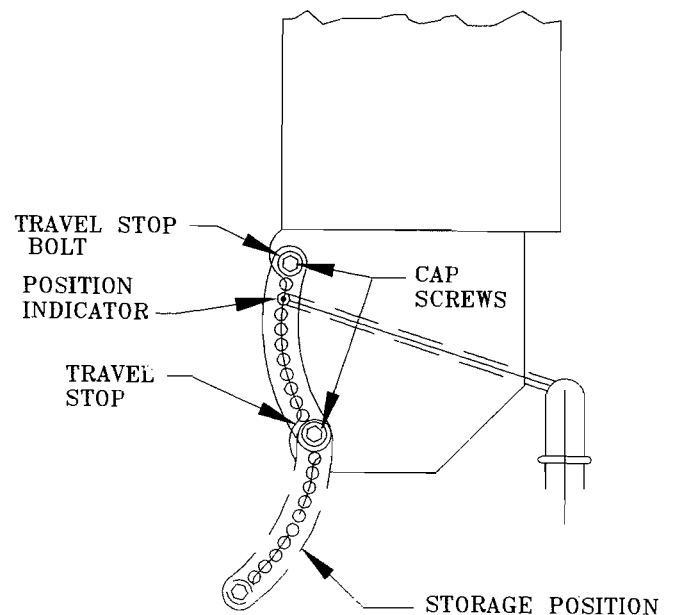
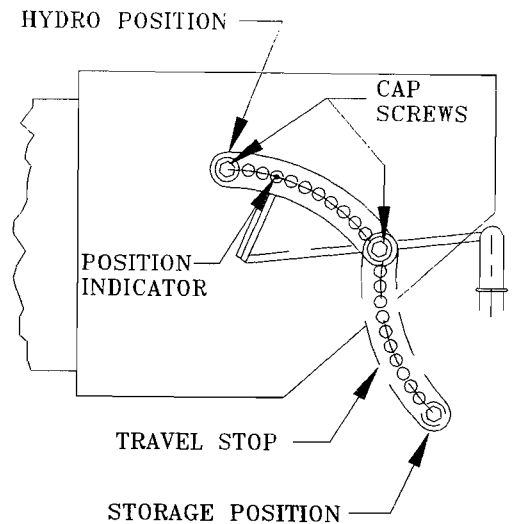
Specify figure number, hanger size, type, load, actual travel (inches), total travel (inches); also, direction of actual travel cold to hot, rod size (inches), and hanger mark number. When ordering type G, specify C-C rod dimension as well as load per spring, and total load. For Figure 881H Type A, B and C, specify "single rod suspension" when required, otherwise a double rod suspension will be supplied. For corrosion-resistant (Galvanized units with neoprene

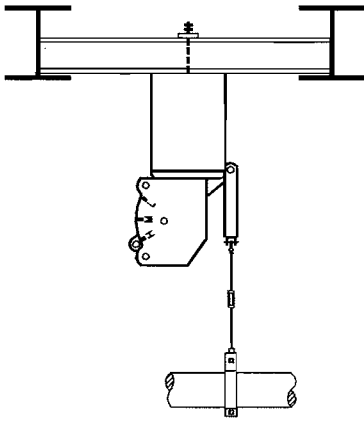
coated coils) specify as C880V or C881H. For your convenience a sample order form is provided on page 49 to make copies for ordering.

R-ROD DIAMETER

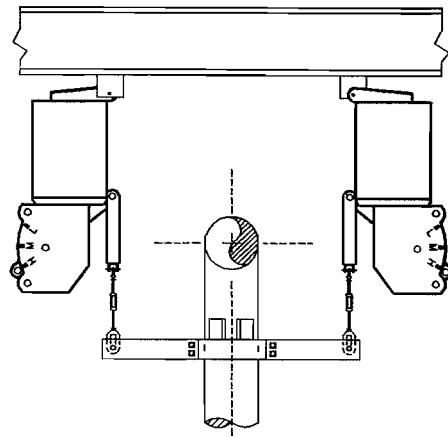
Select the rod size from the Rod Chart shown on pages 26, 46 and 47. Upper attachments, turnbuckles, and load couplings will be tapped per the specified rod size given in the Ordering instructions, unless otherwise noted.

Rod diameters should be based on the load to be carried by the upper rod which includes the weight of the hanger assembly as well as the supported load. Recommended rod diameters conform to MSS-SP-58. Tapped connections for hanger rod sizes 3 inch diameter and smaller are National Coarse Thread Series, Class 2 Fit, 3 1/4 inch and larger rod tappings are 8 UN series threads.

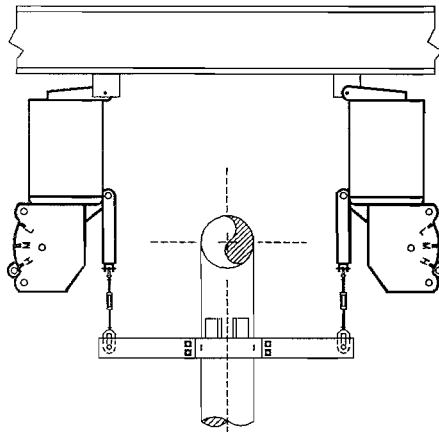




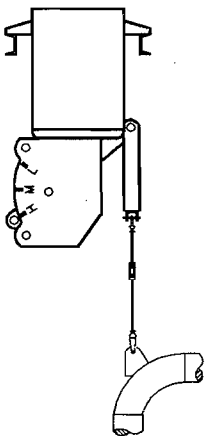
TYPE A



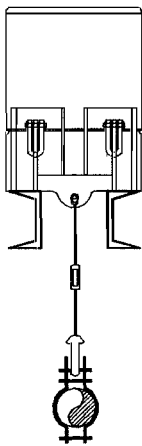
TYPE B



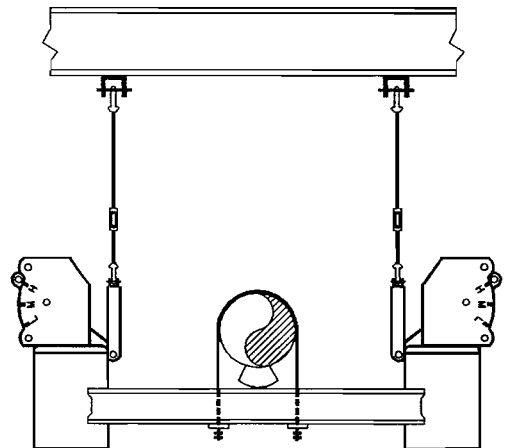
TYPE C



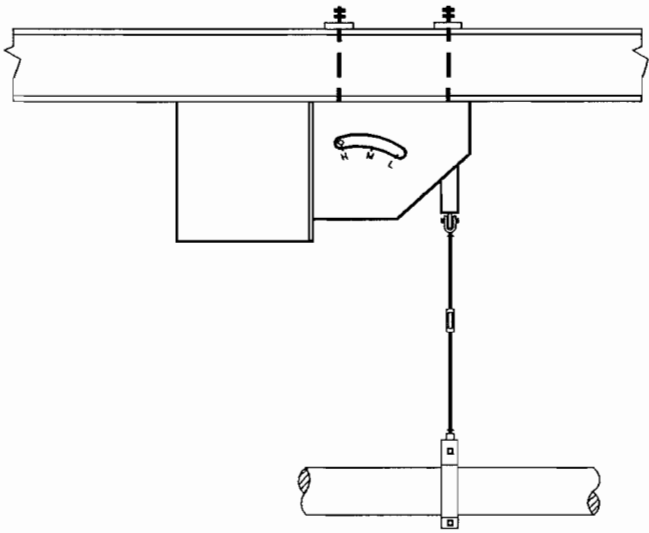
TYPE D



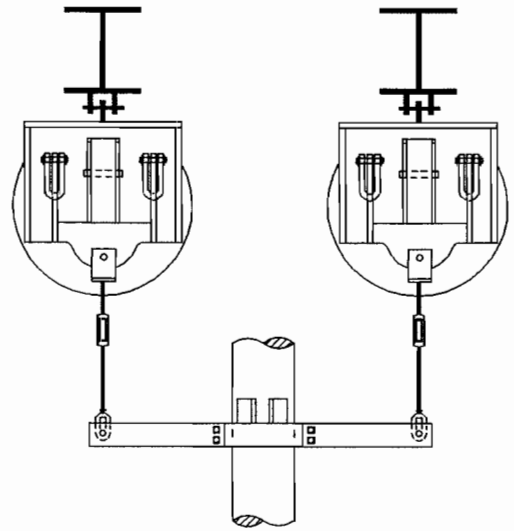
TYPE E



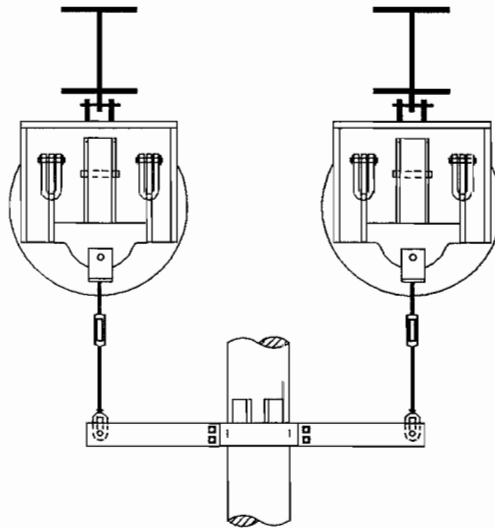
TYPE G



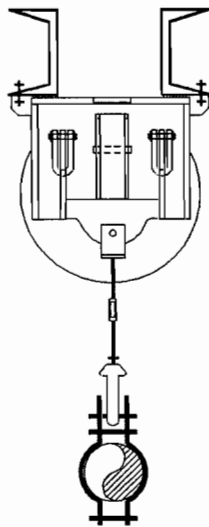
TYPE A



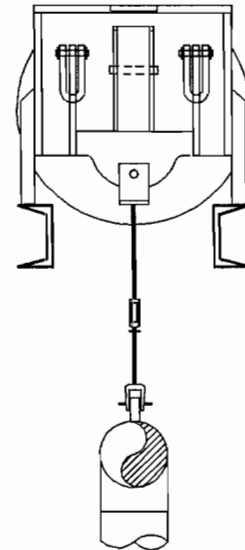
TYPE B



TYPE C



TYPE D



TYPE E

LIFTING LUGS

TO HELP ALLEVIATE THE PROBLEM OF LIFTING LARGE SIZE
CONSTANTS SUPPORTS INTO POSITION FOR INSTALLATION.
THIS PRODUCT IS AVAILABLE WITH LIFTING LUGS
(IF REQUESTED) ON SIZES TEN AND LARGER.

LUG CHART

SIZES	A	B	LUG THICKNESS	HOLE DIA.
10 THRU 18	1/8	5	3/8	13/16
19 THRU 34	1 1/2	7	3/8	13/16
35 THRU 49	2	7 1/2	3/8	13/16
50 THRU 63	2	9 1/2	1/2	13/16
64 THRU 74	2	14	5/8	1 1/8
75 THRU 83	3	17	3/4	1 1/8
84 THRU 110	3	19	3/4	1 3/8

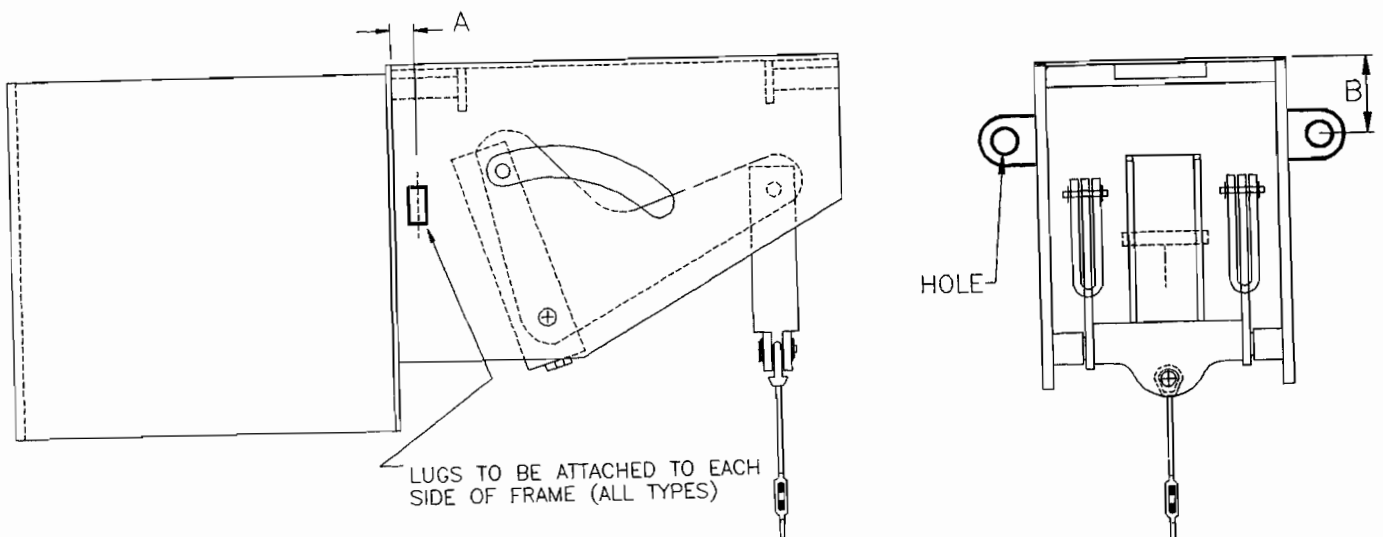
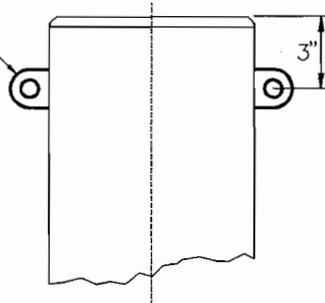


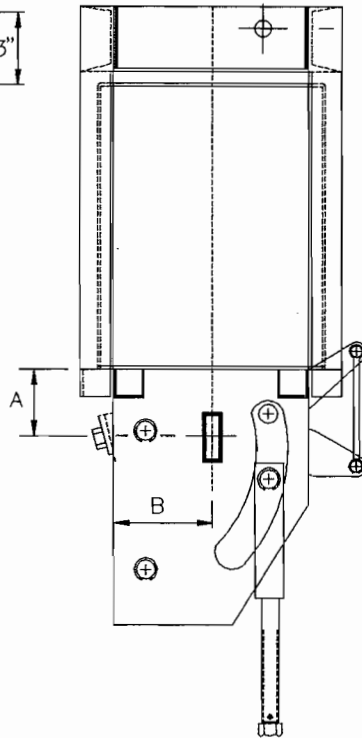
FIG. 880V (VERTICAL)

LIFTING LUGS

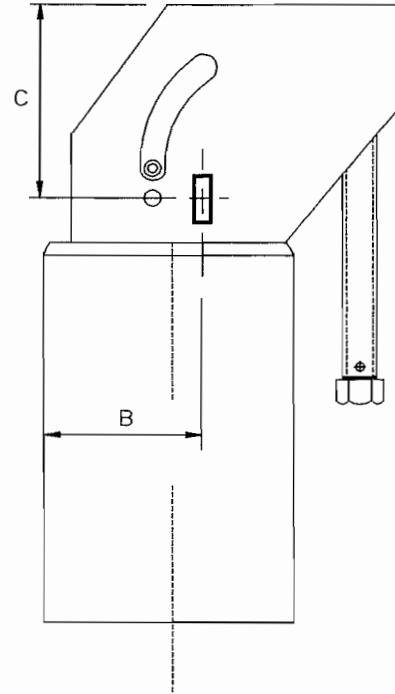
LUGS TO BE 90° FROM CHANNEL ON TYPE "D"



SIZE 10 THRU 63



SIZE 64 THRU 83



SIZE 84 THRU 110

LUGS TO BE ATTACHED TO EACH SIDE OF FRAME AND WILL NEED STABILIZING RIGGING WHEN BEING LIFTED

LUG CHART

SIZES	A	B	C	LUG THICKNESS	HOLE DIA.
10 THRU 18	X	X	X	3/8	13/16
19 THRU 34	X	X	X	3/8	13/16
35 THRU 49	X	X	X	3/8	13/16
50 THRU 63	X	X	X	1/2	13/16
64 THRU 74	8	10	X	5/8	1 1/8
75 THRU 83	8	15	X	3/4	1 1/8
84 THRU 110	X	16	24	3/4	1 3/8

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches														
	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½
1	144 173	108 130	86 104	72 87	62 74	54 65	48 58	43 52	39 47	36 43	33 40	31 37	29 35	27 33	
2	204	153	122	102	87	77	68	61	56	51	47	44	41	38	
3	233	175	140	117	100	88	78	70	64	58	54	50	47	44	
4	280	210	168	140	120	105	93	84	76	70	65	60	56	53	
5	327	245	196	163	140	123	109	98	89	82	75	70	65	61	
6	373	280	224	187	160	140	124	112	102	93	86	80	75	70	
7	451	338	270	225	193	169	150	135	123	113	104	97	90	85	
8	527	395	316	263	226	198	176	158	144	132	122	113	105	99	
9	600	450	360	300	257	225	200	180	164	150	138	129	120	113	
10	727	545	436	363	311	273	242	218	198	182	168	156	145	136	
11	851	638	510	425	365	319	284	255	232	213	196	182	170	160	
12	977	733	586	489	419	367	326	293	267	244	226	209	195	183	
13	1177	883	706	589	505	442	392	353	321	294	272	252	235	221	
14	1373	1030	824	687	589	515	458	412	375	343	317	294	275	258	
15	1573	1180	944	787	674	590	524	472	429	393	363	337	315	295	
16	1893	1420	1136	947	811	710	631	568	516	473	437	406	379	355	
17	2217	1663	1330	1109	950	832	739	665	605	554	512	475	443	416	
18	2540	1905	1524	1270	1089	953	847	762	693	635	586	544	508	476	
19		2025	1620	1350	1157	1013	900	810	736	675	623	579	540	506	448 476
20		2145	1716	1430	1226	1073	953	858	780	715	660	613	572	536	505
21		2335	1868	1557	1334	1168	1038	934	849	778	718	667	623	584	549
22		2525	2020	1683	1443	1263	1122	1010	918	842	777	721	673	631	594
23		2710	2168	1807	1549	1355	1204	1084	985	903	834	775	723	678	638
24		2910	2328	1940	1663	1455	1293	1164	1058	970	895	831	776	728	685
25		3110	2488	2073	1777	1555	1382	1244	1131	1037	957	889	829	778	732
26		3310	2648	2207	1891	1655	1471	1324	1204	1103	1018	946	883	828	779
27		3630	2904	2420	2074	1815	1613	1452	1320	1210	1117	1037	968	908	854
28		3950	3160	2633	2257	1975	1756	1580	1436	1317	1215	1129	1053	988	929
29		4270	3416	2847	2440	2135	1898	1708	1553	1423	1314	1220	1139	1068	1005
30		4535	3628	3023	2591	2268	2016	1814	1649	1512	1395	1296	1209	1134	1067
31		4795	3836	3197	2740	2398	2131	1918	1744	1598	1475	1370	1279	1199	1128
32		5060	4048	3373	2891	2530	2249	2024	1840	1687	1557	1446	1349	1265	1191
33		5295	4236	3530	3026	2648	2353	2118	1925	1765	1629	1513	1412	1324	1246
34		5525	4420	3683	3157	2763	2456	2210	2009	1842	1700	1579	1473	1381	1300

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A Outlined Area
Type B Outlined Area
Type C Outlined Area
Type D Outlined Area
Type E Outlined Area
Type F Outlined Area
Type G Outlined Area

881H Horizontal

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown
Type D All Ranges Shown
Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches														
	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½
35			4696	3913	3354	2935	2609	2348	2135	1957	1806	1677	1565	1468	1381
36			4968	4140	3549	3105	2760	2484	2258	2070	1911	1774	1656	1553	1461
37			5240	4367	3743	3275	2911	2620	2382	2183	2015	1871	1747	1638	1541
38			5616	4680	4011	3510	3120	2808	2553	2340	2160	2006	1872	1755	1652
39			5988	4990	4277	3743	3327	2994	2722	2495	2303	2139	1996	1871	1761
40			6360	5300	4543	3975	3533	3180	2891	2650	2446	2271	2120	1988	1871
41			6976	5813	4983	4360	3876	3488	3171	2907	2683	2491	2325	2180	2052
42			7588	6323	5420	4743	4216	3794	3449	3162	2919	2710	2529	2371	2232
43			8200	6833	5857	5125	4556	4100	3727	3417	3154	2929	2733	2563	2412
44			8724	7270	6231	5453	4847	4362	3965	3635	3355	3116	2908	2726	2566
45			9284	7737	6631	5803	5158	4642	4220	3868	3571	3316	3095	2901	2731
46			9760	8133	6971	6100	5422	4880	4436	4067	3754	3486	3253	3050	2871
47			10376	8647	7411	6485	5764	5188	4716	4323	3991	3706	3459	3243	3052
48			10988	9157	7848	6868	6104	5494	4995	4578	4226	3924	3663	3434	3232
49			11600	9667	8286	7250	6444	5800	5273	4833	4462	4143	3867	3625	3412
50				10367	8886	7775	6911	6220	5655	5183	4785	4443	4147	3888	3659
51				11067	9486	8300	7378	6640	6036	5533	5108	4743	4427	4150	3906
52				11847	10154	8885	7898	7108	6462	5923	5468	5077	4739	4443	4181
53				12623	10820	9468	8415	7574	6886	6311	5826	5410	5049	4734	4455
54				13400	11486	10050	8933	8040	7309	6700	6185	5743	5360	5025	4730
55				14713	12611	11035	9809	8828	8026	7356	6791	6306	5885	5518	5193
56				16023	13734	12018	10682	9614	8740	8011	7396	6867	6409	6009	5655
57				17333	14857	13000	11555	10400	9455	8666	8000	7429	6933	6500	6118
58				18423	15791	13818	12282	11054	10049	9211	8503	7896	7369	6809	6503
59				19510	16723	14633	13007	11706	10642	9755	9005	8362	7804	7316	6886
60				20600	17657	15450	13733	12360	11236	10300	9508	8829	8240	7725	7271
61				21890	18763	16418	14593	13134	11940	10945	10103	9382	8756	8209	7726
62				23176	19865	17383	15451	13906	12642	11588	10697	9933	9270	8691	8180
63				24463	20968	18348	16309	14678	13344	12231	11291	10484	9785	9174	8634

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown
 Type F All Ranges Shown
 Type G All Ranges Shown

881H Horizontal

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches														
	9	9½	10	10½	11	11½	12	12½	13	13½	14	14½	15	15½	16
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19	423 450	401 426	381 405												
20	477	452	429												
21	519	492	467												
22	561	532	505												
23	602	571	542												
24	647	613	582												
25	691	655	622												
26	736	697	662												
27	807	764	726												
28	878	832	790												
29	949	899	854												
30	1008	955	907												
31	1066	1009	959												
32	1124	1065	1012												
33	1177	1115	1059												
34	1228	1163	1105												

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown
 Type F All Ranges Shown
 Type G All Ranges Shown

881H Horizontal

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches														
	9	9½	10	10½	11	11½	12	12½	13	13½	14	14½	15	15½	16
35	1304	1236	1174	1053 1118	1005 1067	962 1021	922 978	885 939	851 903	819 870	790 838				
36	1380	1307	1242	1183	1129	1080	1035	994	955	920	887				
37	1456	1379	1310	1248	1191	1139	1092	1048	1008	970	936				
38	1560	1478	1404	1337	1276	1221	1170	1123	1080	1040	1003				
39	1663	1576	1497	1426	1361	1302	1247	1198	1151	1109	1069				
40	1767	1674	1590	1514	1445	1383	1325	1272	1223	1178	1136				
41	1938	1836	1744	1661	1585	1516	1453	1395	1341	1292	1246				
42	2108	1997	1897	1807	1724	1649	1581	1518	1459	1405	1355				
43	2278	2158	2050	1952	1863	1782	1708	1640	1577	1518	1464				
44	2423	2296	2181	2077	1983	1896	1817	1745	1678	1615	1558				
45	2579	2443	2321	2210	2110	2018	1934	1857	1785	1719	1658				
46	2711	2568	2440	2324	2218	2122	2033	1952	1877	1807	1743				
47	2882	2730	2594	2470	2358	2255	2162	2075	1995	1921	1853				
48	3052	2891	2747	2616	2497	2389	2289	2198	2113	2035	1962				
49	3222	3053	2900	2762	2636	2522	2417	2320	2231	2148	2071				
50	3456	3274	3110	2962	2827	2704	2592	2488	2392	2304	2221	2001 2145	1934 2073	1871 2006	1813 1944
51	3689	3495	3320	3162	3018	2887	2767	2656	2554	2459	2371	2289	2213	2142	2075
52	3949	3741	3554	3384	3231	3090	2962	2843	2734	2632	2538	2451	2369	2293	2221
53	4208	3986	3787	3606	3442	3293	3156	3030	2913	2805	2705	2612	2524	2443	2367
54	4467	4231	4020	3828	3654	3495	3350	3216	3092	2978	2871	2772	2680	2593	2513
55	4904	4646	4414	4203	4012	3838	3678	3531	3395	3269	3152	3044	2942	2847	2759
56	5341	5060	4807	4518	4370	4180	4006	3846	3698	3561	3433	3315	3204	3101	3004
57	5778	5474	5200	4952	4727	4521	4333	4160	4000	3852	3714	3586	3466	3355	3250
58	6141	5818	5527	5263	5024	4806	4606	4422	4251	4094	3947	3811	3684	3565	3454
59	6503	6161	5853	5574	5320	5089	4877	4682	4502	4335	4180	4036	3902	3776	3658
60	6867	6505	6180	5885	5618	5374	5150	4944	4754	4578	4414	4262	4120	3987	3863
61	7297	6912	6567	6254	5969	5710	5472	5254	5051	4864	4690	4529	4378	4236	4104
62	7725	7319	6953	6621	6320	6046	5794	5562	5348	5150	4965	4795	4635	4485	4346
63	8154	7725	7339	6989	6671	6381	6116	5871	5645	5436	5242	5061	4892	4734	4587

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown
 Type F All Ranges Shown
 Type G All Ranges Shown

881H Horizontal

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches																
	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12
64	19225	17089	15380	13982	12816	11831	10986	10253	9613	9047	8544	8094	7690	7323	6990	6686	6408
65	20100	17866	16080	14618	13400	12370	11486	10720	10050	9459	8933	8463	8040	7657	7308	6991	6700
66	22068	19615	17654	16049	14711	13580	12610	11769	11034	10385	9808	9291	8827	8406	8024	7675	7356
67	24033	21362	19226	17478	16021	14790	13733	12817	12016	11310	10681	10119	9613	9154	8738	8359	8011
68	26000	23111	20800	18909	17333	16000	14857	13866	13000	12236	11555	10947	10400	9904	9454	9043	8666
69	27635	24564	22108	20098	18423	17007	15792	14738	13818	13005	12282	11635	11054	10527	10048	9611	9211
70	29268	26015	23414	21286	19511	18011	16725	15609	14634	13773	13008	12323	11707	11149	10642	10179	9755
71	30900	27466	24720	22473	20599	19016	17657	16480	15450	14542	13733	13010	12360	11770	11235	10747	10300
72	32835	29186	26268	23880	21889	20207	18763	17512	16418	15452	14593	13825	13134	12508	11939	11420	10945
73	34768	30904	27814	25286	23177	21396	19868	18542	17384	16362	15452	14639	13907	13244	12641	12092	11589
74	36700	32622	29360	26691	24466	22585	20972	19573	18350	17271	16311	15452	14680	13980	13344	12764	12233
75	38800	34489	31040	28218	25866	23878	22172	20693	19400	18259	17244	16336	15520	14780	14108	13495	12933
76	40900	36355	32720	29746	27266	25170	23372	21813	20450	19248	18178	17221	16360	15580	14871	14225	13633
77	43000	38222	34400	31273	28666	26462	24572	22933	21500	20236	19111	18105	17200	16380	15635	14955	14333
78	45335	40297	36268	32971	30222	27899	25906	24178	22668	21335	20149	19088	18134	17269	16484	15768	15111
79	47668	42371	38134	34668	31799	29335	27239	25422	23834	22432	21185	20070	19067	18158	17332	16579	15889
80	50000	44444	40000	36364	33332	30770	28572	26666	25000	23530	22222	21052	20000	19046	18180	17390	16666
81	52500	46666	42000	38182	35000	32309	30000	27999	26250	24707	23333	22105	21000	19998	19089	18260	17500
82	55000	48888	44000	40000	36665	33847	31429	29333	27500	25883	24444	23157	22000	20951	20000	19129	18333
83	57500	51111	46000	41819	38332	35386	32858	30666	28750	27060	25555	24210	23000	21903	20907	20000	19166

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type E All Ranges Shown

881H Horizontal

Type A All Ranges Shown
 Type B All Ranges Shown
 Type C All Ranges Shown
 Type D All Ranges Shown
 Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches																	
	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12	
84			49200	44728	40998	37847	35144	32799	30750	28942	27333	25894	24600	23427	22361	21390	20500	
85			52400	47637	43665	40309	37429	34932	32750	30824	29111	27578	26200	24950	23816	22781	21832	
86			55400	50364	46165	42616	39572	36932	34625	32589	30777	29157	27700	26379	25179	24085	23082	
87			58400	53091	48665	44924	41715	38932	36500	34354	32444	30736	29200	27807	26543	25389	24332	
88			61400	55819	51165	47332	43858	40932	38375	36119	34111	32315	30700	29236	27906	26694	25582	
89			66000	60000	54998	50771	47144	43999	41250	38825	36666	34736	33000	31426	29997	28694	27500	
90					61331	56617	52572	49065	46000	43295	40888	38736	36800	35045	33451	31998	30665	
91					67164	62002	57573	53732	50375	47413	44777	42420	40300	38378	36633	35041	33582	
92					73500	67848	63001	58799	55125	51884	49000	46420	44100	41996	40087	38345	36749	
93					80830	74617	69287	64665	60625	57060	53888	51051	48500	46187	44087	42171	40415	
94					87500	81540	75716	70665	66250	62355	58888	55788	53000	50472	48177	46084	44165	
95							78930	73665	69063	65002	61388	58156	55250	52615	50222	48040	46040	
96							82145	76665	71875	67649	63888	60525	57500	54757	52268	50000	47915	
97							85360	79665	74688	70296	66388	62893	59750	56900	54313	51953	49790	
98							87500	82665	77500	72943	68888	65261	62000	59043	56358	53909	51665	
99								85998	80625	75884	71666	67893	64500	61423	58631	56083	53748	
100								87500	83750	78826	74444	70524	67000	63804	60903	58257	55831	
101									86875	81767	77221	73156	69500	66185	63176	60430	57914	
102									87500	84708	80000	75787	72000	68566	65448	62604	60000	
103										87500	83610	79210	75250	71661	68402	65430	62706	
104											87221	82629	78500	74756	71357	68256	65414	
105											87500	86050	81750	77851	74311	71082	68122	
106												87500	85000	80946	77265	73908	70831	
107													87500	84469	80628	77125	73914	
108														87500	83992	80342	77000	
109															87446	83646	80163	
110																87500	86950	83330

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown

881H Horizontal

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown
Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches															
	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18	18½	19	19½	20
64	6152	5915	5696	5492	5303	5126	4961	4806								
65	6432	6184	5955	5742	5544	5359	5187	5025								
66	7062	6790	6538	6304	6087	5884	5694	5517								
67	7690	7394	7120	6966	6629	6408	6201	6008								
68	8320	8000	7703	7428	7172	6933	6709	6500								
69	8843	8503	8188	7895	7623	7369	7131	6909								
70	9366	9005	8671	8361	8073	7804	7552	7317								
71	9888	9507	9155	8828	8523	8239	7973	7725								
72	10507	10103	9728	9380	9057	8755	8473	8209								
73	11126	10697	10301	9932	9590	9270	8971	8692								
74	11744	11292	10873	10484	10123	9786	9470	9175								
75	12416	11938	11496	11084	10703	10346	10012	9700								
76	13088	12584	12118	11684	11282	10906	10554	10225								
77	13760	13230	12740	12284	11861	11466	11096	10750								
78	14507	13949	13432	12951	12505	12088	11698	11334								
79	15254	14666	14123	13618	13149	12710	12300	11917								
80	16000	15384	14814	14284	13792	13332	12902	12500								
81	16800	16153	15555	14998	14482	14000	13547	13125								
82	17600	16922	16295	15712	15171	14665	14192	13750								
83	18400	17692	17036	16427	15861	15332	14837	14375								

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown
Type E All Ranges Shown

881H Horizontal

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown
Type D All Ranges Shown
Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches															
	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18	18½	19	19½	20
84	19680	18922	18221	17569	16964	16398	15869	15375								
85	20960	20153	19406	18712	18068	17465	16902	16375								
86	22160	21307	20517	19783	19102	18465	17869	17313								
87	23360	22461	21628	20855	20136	19465	18837	18250								
88	24560	23614	22739	21926	21171	20465	19805	19188								
89	26400	25384	24443	23569	22757	21998	21288	20625								
90	29440	28307	27258	26283	25377	24531	23740	23000								
91	32240	31000	29850	28782	27791	26864	25998	25188								
92	35280	33922	32665	31496	30411	29397	28449	27563								
93	38800	37306	35924	34639	33446	32330	31287	30313								
94	42400	40768	39257	37853	36549	35330	34190	33125								
95	44200	42498	40924	39460	38100	36830	35642	34531	32119	31175	30285	29442	28647	27894	27179	26500
96	46000	44230	42590	41067	39652	38330	37093	35938	34845	33822	32856	31941	31080	30262	29486	28750
97	47800	45960	44257	42673	41204	39829	39545	37344	36209	35145	34141	33191	32295	31446	30640	29875
98	49600	47690	45923	44280	42755	41329	40000	38750	37572	36468	35427	34441	33511	32631	31794	31000
99	51600	49613	47775	46066	44479	42996	41609	40313	39087	37939	36855	35830	34862	33946	33076	32250
100	53600	51536	49627	47851	46203	44662	43221	41875	40602	39409	38284	37219	36214	35262	34358	33500
101	55600	53459	51479	49637	47927	46329	44834	43438	42117	40880	39712	38607	37565	36578	35640	34750
102	57600	56382	53330	51422	49651	47995	46447	45000	43632	42350	41141	39996	38916	37894	36922	36000
103	60200	57882	55738	53744	51892	50162	48544	47031	45602	44262	42998	41801	40673	39604	38588	37625
104	62800	60382	58145	56065	54135	52328	50640	49063	47571	46174	44855	43607	42429	41315	40255	39250
105	65400	62882	60552	58386	56375	54495	52737	51094	49541	48085	46712	45412	44186	43025	41921	40875
106	68000	65382	62960	60707	58616	56661	54834	53125	51510	50000	48569	47218	45943	44736	43588	42500
107	70960	68228	65700	63350	61168	59127	57220	55438	53752	52173	50683	49273	47942	46683	45485	44350
108	73920	71074	68441	65992	63719	61594	59607	57750	55994	54350	52797	51328	49942	48631	47383	46200
109	76960	74000	71255	68705	66340	64127	62059	60125	58297	56585	54969	53439	52000	50630	49331	48100
110	80000	76920	74070	71420	68960	66660	64510	62500	60600	58820	57140	55550	54050	52630	51280	50000

*NOTE: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

STANDARD TYPE UNITS AVAILABLE UNITS LISTED BELOW ARE AVAILABLE AS SHOWN

880V Vertical

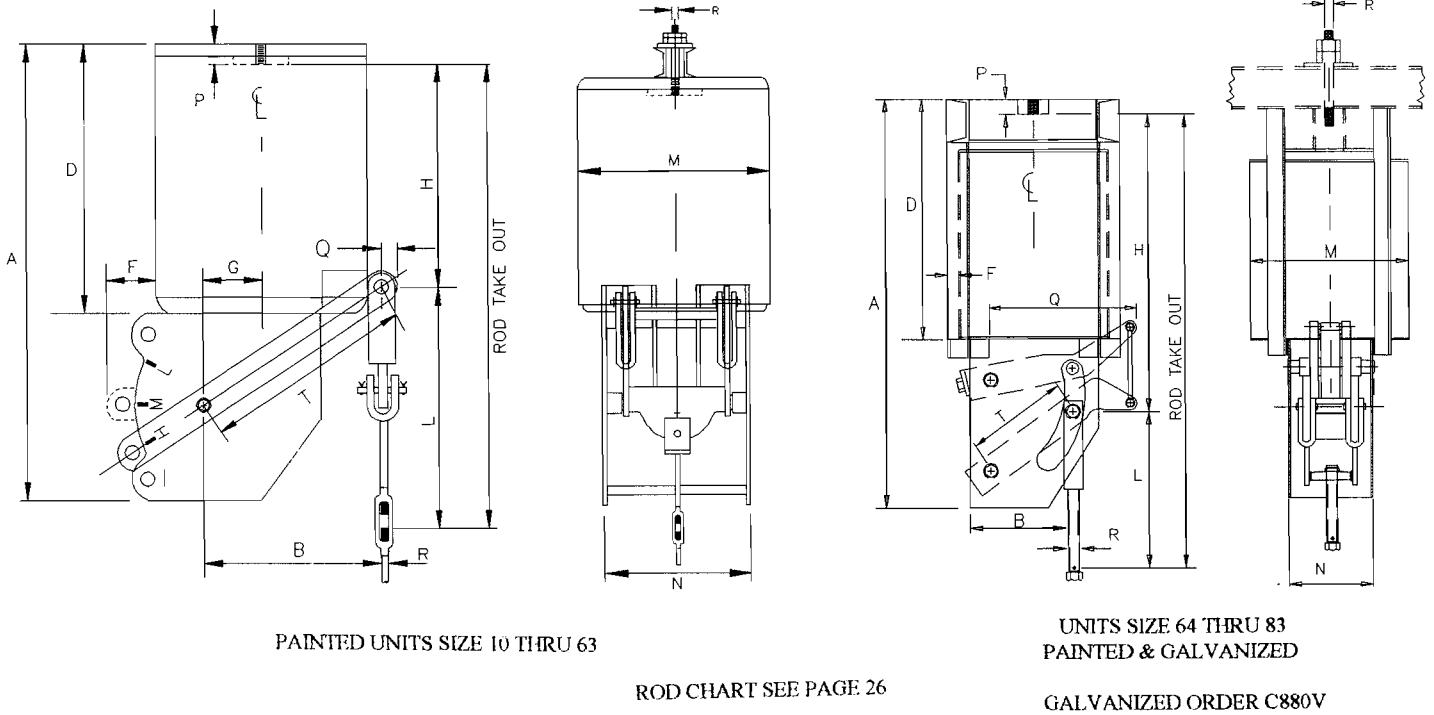
Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown

881H Horizontal

Type A All Ranges Shown
Type B All Ranges Shown
Type C All Ranges Shown
Type E All Ranges Shown

Refer to pages 42 and 43 for sizing for Figure 881H Type U Constant.

FIGURE NO. 880V - TYPE A CONSTANT SUPPORTS



The 880V - Type A constant is a vertical unit for attaching to structural members by installing a threaded rod into the tapped hole, dimension "R", provided in the top of the unit. Proper engagement of the rod is equal to "P" + 3/8 of an inch. A sight hole is provided in the top of the can to assure correct thread engagement.

Notes: T = Total Travel

Units up to 1 1/2" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" Turnbuckles. Units with 1 3/4" rod or larger are furnished with load couplings.

Rod Take Out = H + L

ALL DIMENSIONS ARE IN INCHES

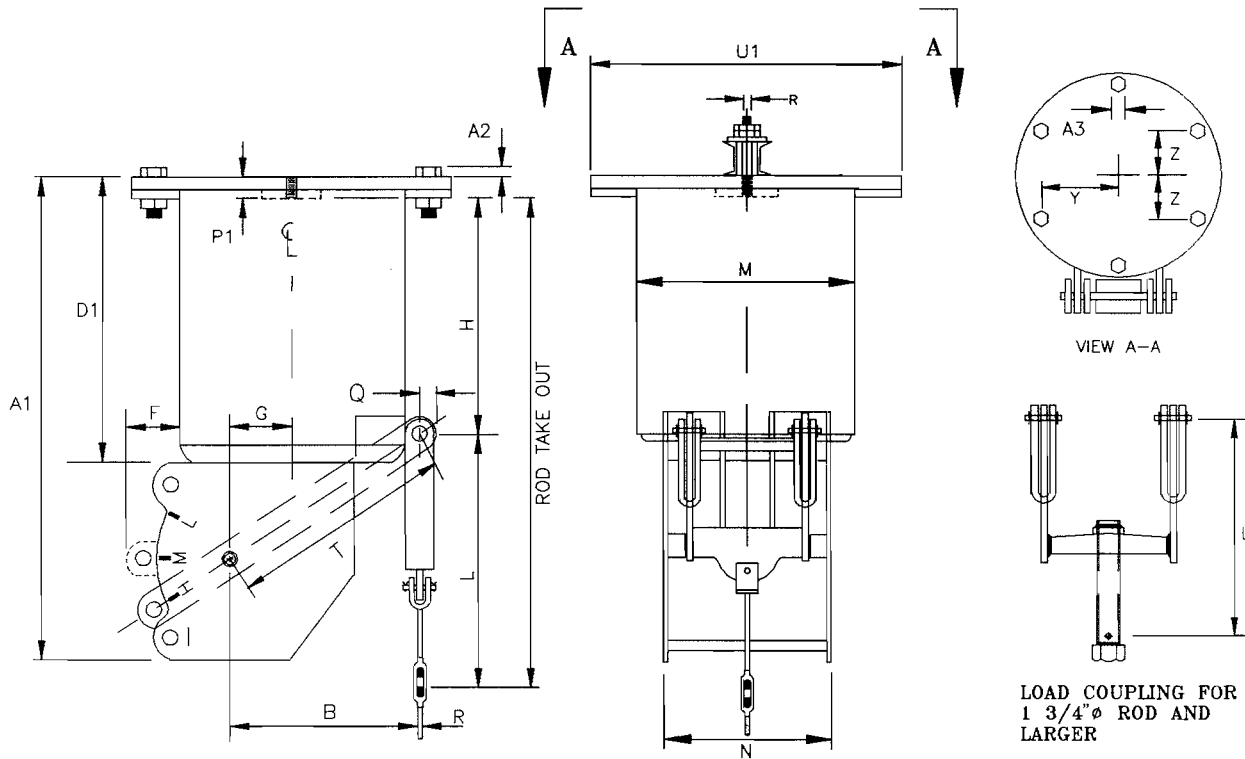
Size	Total Travel	A	D	F	G	M	N	P	Q	Dimensions for galv. C880V only							Std. Rod "R"	D1
										A1	A2	A3	P1	U	Y	Z		
1-9	Available in Fig. 881H Only																	
10-18	5" or less 5 1/2" or more	18 ⁹ / ₁₆	11 ¹ / ₈	2	1 1/2	8 ⁵ / ₈	6 ³ / ₈	7 ⁷ / ₈	3/4	18 ⁷ / ₁₆	1/2	7/8	1	12	4 1/2	2 ⁹ / ₁₆	1/2 - 3/4	11 1/4
19-34	5" or less 5 1/2" or more	26 ¹⁵ / ₁₆	16 ³ / ₄	2 1/8	2 ⁵ / ₈	12 ³ / ₄	8 ³ / ₈	1 1/8	7/8	27 ³ / ₁₆	5/8	1 ¹ / ₁₆	1 ³ / ₈	16 ³ / ₄	6 ³ / ₈	3 ¹ / ₁₆	1/2 - 1 1/4	17
35-49	6" or less 6 1/2" or more	33 ⁵ / ₈	20 1/2	4 ³ / ₄	3 ³ / ₄	14	9 ¹⁵ / ₁₆	1 1/2	1 1/4	34 ¹ / ₈	3/4	1 1/4	1 ³ / ₄	18	6 ¹⁵ / ₁₆	4	1/2 - 1 3/4	21
50-63	8" or less 8 1/2" or more	49	30	8 ⁵ / ₁₆	5 ⁷ / ₈	18	11 1/4	2	1 1/2	50	7/8	1 ⁷ / ₁₆	2 ³ / ₄	24	10 1/2	9 ¹ / ₁₆	3/4 - 2 1/4	31
64-74	10 1/2" or less 11" or more	70 ³ / ₄	47 1/2	1 ³ / ₁₆	7 1/2	22 1/4	11	2 1/2	25 ³ / ₈	-	-	-	-	-	-	-	1 1/4 - 2 3/4	
75-83	10 1/2" or less 11" or more	72 ³ / ₄	49 1/2	1 1/2	7 1/2	27 1/4	11	3	25 ³ / ₈	-	-	-	-	-	-	-	1 1/2 - 3 1/4*	
84-110	See Page 27																	

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "B" AVERAGE INCHES

B	Total Travel																
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1 ³ / ₈	1 ⁷ / ₈	2 ¹ / ₄	2 ³ / ₄	3 ⁵ / ₈	4 ⁵ / ₈	5 1/2	6 1/2	7 ³ / ₈	8 1/4	9 1/4	10 ¹ / ₈	11	12	12 ⁷ / ₈	13 ⁷ / ₈	14 ³ / ₄

FIGURE NO. 880V - TYPE A CONSTANT SUPPORTS



C880V

GALVANIZED UNIT SIZE 10 THRU 63

LOAD COUPLING FOR
1 3/4" Ø ROD AND
LARGER

To dimension "L" add 3" for total travels 6 1/2" and over for 12" turnbuckle up to 1 1/2" rod size.

DIMENSIONS "L"

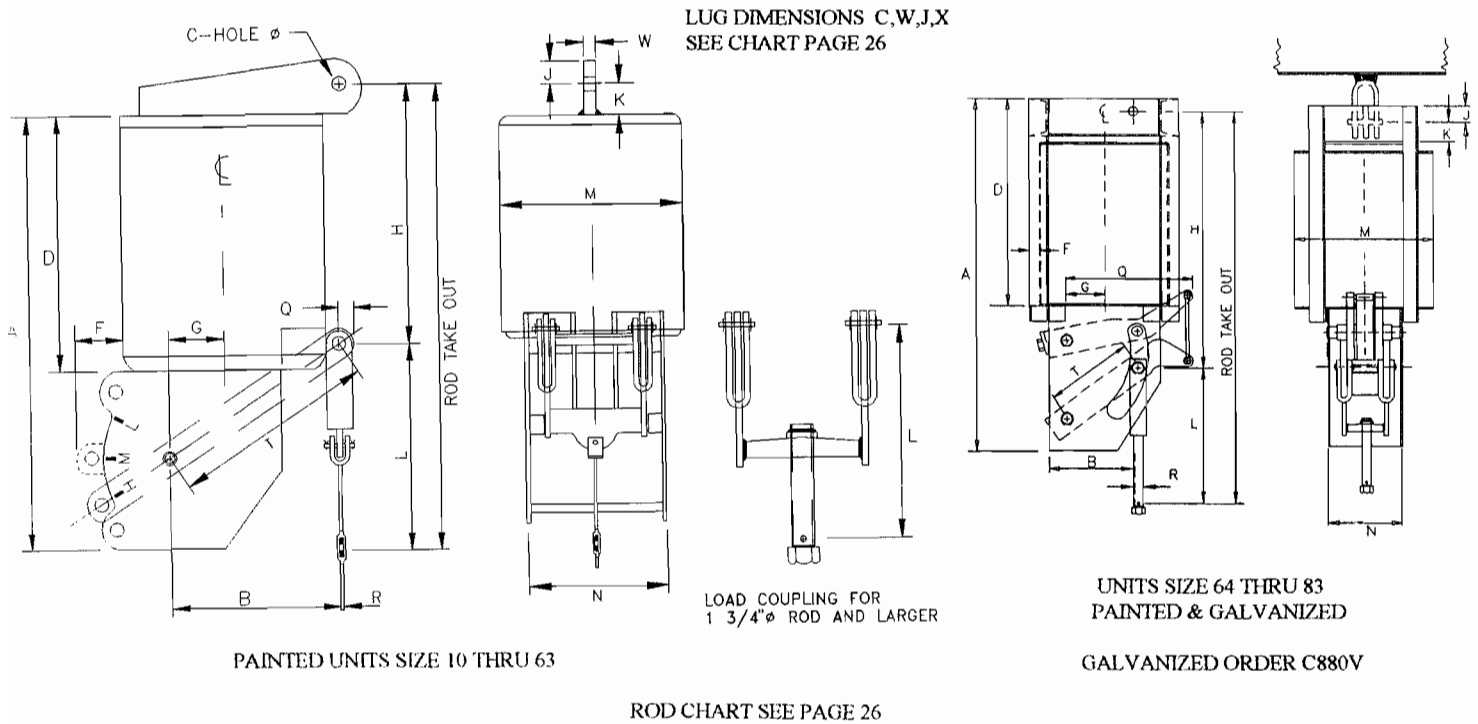
Hanger Size	Rod Size "R"						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	1/2	5/8	3/4	1	1 1/4	1 1/2	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	Available in Fig. 881H Only											
10-18	15 5/8	15 7/8	16 1/8	-	-	-	1 1/2-3 1/2	6	4-8	8 1/2	8 1/2-13 1/2	11 3/4
19-34	17 3/8	17 5/8	17 7/8	18 3/8	18 5/8	-	2-5	8 1/2	5 1/2-10	10 1/2	10 1/2-13 1/2	13 3/8
35-49	18 1/8	18 3/8	18 5/8	19 1/8	19 3/8	19 3/4	2 1/2-6	8 7/8	6 1/2-14	13 1/2	-	-
50-63	-	-	21 3/8	21 5/8	22 1/8	22 1/2	3-11	10 5/8	11 1/2-16	15 5/8	-	-
64-74	-	-	-	-	24 1/8	24 1/2	4-16	16 1/8	-	-	-	-
75-83	-	-	-	-	-	24 1/2	4-16	18 7/8	-	-	-	-
84-110	See Page 27											

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "H"

Hgr. Size	Total Travel																Apprx. Weight in Pounds				
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Net		Shipping	
1-9	Available in Fig. 881H Only																				
10-18	13	12 3/4	12 1/2	12 1/4	11 1/2	11	10 1/2	10	9 1/2	-	-	-	-	-	-	-	-	70	88	75	93
19-34	-	19 3/4	19 1/2	19 1/4	18 1/2	18	17 1/2	17	16 1/2	16	15 1/2	-	-	-	-	-	-	200	247	208	255
35-49	-	-	23 3/4	23 1/2	23	22 1/2	22	21 1/2	21	20 1/2	20	19 1/2	19	18 1/2	18	-	-	370	425	406	461
50-63	-	-	-	36	35 1/2	35	34 1/2	34	33 1/2	33	32 1/2	32	31 1/2	31	30 1/2	30	29 1/2	615	811	675	871
64-74	-	-	-	-	62	61 1/2	61	60 1/2	60	59 1/2	59	58 1/2	58	57 1/2	57	56 1/2	56	1475	1475	1575	1575
75-83	-	-	-	-	63 1/2	63	62 1/2	62	61 1/2	61	60 1/2	60	59 1/2	59	58 1/2	58	57 1/2	2590	2590	2690	2690
84-110	See Page 27																				

FIGURE NO. 880V - TYPE B CONSTANT SUPPORTS



The 880V - Type B constant is a vertical unit for attaching to structural members with a single lug. The lug is compatible with a Figure 113 Welded Beam Attachment, Figure 276 Clevis, or a pair of angles for limited headroom installation.

Notes: T = Total Travel

Units up to 1 1/2" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" Turnbuckles. Units with 1 3/4" rod or larger are furnished with load couplings.

Rod Take Out = H + L

ALL DIMENSIONS ARE IN INCHES

Size	Total Travel	A	D	F	G	M	N	K	Q	Dimensions for galv. C880V only							Std. Rod "R"
										A1	A2	A3	D1	U	Y	Z	
1-9	Available in Fig. 881H Only																
10-18	5" or less 5 1/2" or more	18 ⁹ / ₁₆	11 ¹ / ₈	2	1 1/2	8 ⁵ / ₈	6 ³ / ₈	1 1/2	3/4	18 ⁷ / ₁₆	1/2	7/8	11 1/4	12	4 1/2	2 ⁹ / ₁₆	1/2 - 3/4
19-34	5" or less 5 1/2" or more	26 ¹⁵ / ₁₆	16 ³ / ₄	2 1/8	2 5/8	12 ³ / ₄	8 ³ / ₈	2	7/8	27 ³ / ₁₆	5/8	1 1/16	17	16 ³ / ₄	6 ³ / ₈	3 ¹¹ / ₁₆	1/2 - 1 1/4
35-49	6" or less 6 1/2" or more	33 ⁵ / ₈	20 1/2	4 3/4	3 3/4	14	9 ¹⁵ / ₁₆	3	1 1/4	34 ¹ / ₈	3/4	1 1/4	21	18	6 ¹⁵ / ₁₆	4	1/2 - 1 3/4
50-63	8" or less 8 1/2" or more	49	30	8 ⁵ / ₁₆	5 7/8	18	11 1/4	4	1 1/2	50	7/8	1 ⁷ / ₁₆	31	24	10 1/2	9 ¹ / ₁₆	3/4 - 2 1/4
64-74	10 1/2" or less 11" or more	70 ³ / ₄	47 1/2	1 ³ / ₁₆	7 1/2	22 ¹ / ₄	11	4 1/2	25 ³ / ₈	-	-	-	-	-	-	-	1 1/4 - 2 3/4
75-83	10 1/2" or less 11" or more	72 ³ / ₄	49 1/2	1 1/2	7 1/2	27 ¹ / ₄	11	3 5/8	25 ³ / ₈	-	-	-	-	-	-	-	1 1/2 - 3 1/4*
84-110	See Page 27																

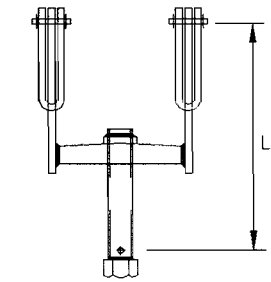
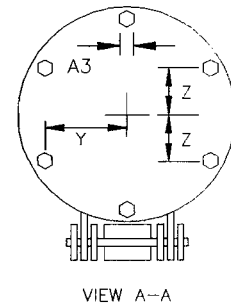
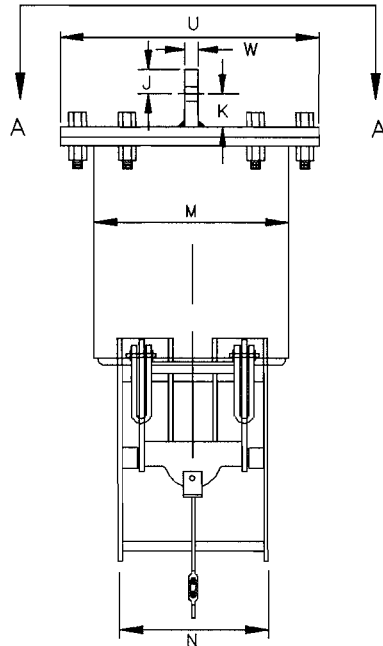
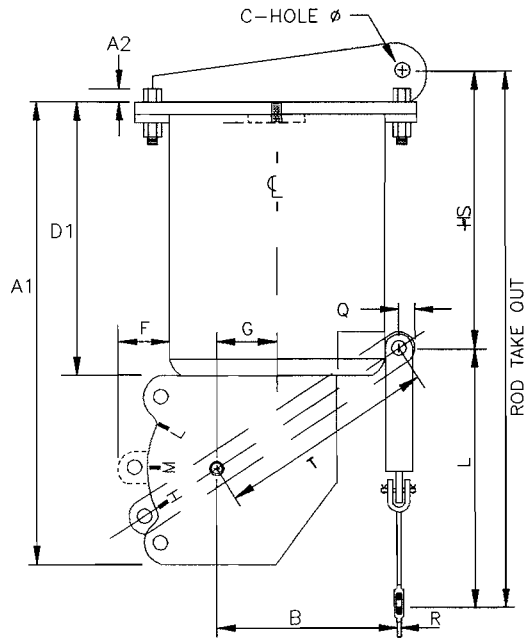
*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "B" AVERAGE INCHES

B	Total Travel																
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1 ³ / ₈	1 ⁷ / ₈	2 ¹ / ₄	2 ³ / ₄	3 ⁵ / ₈	4 ⁵ / ₈	5 1/2	6 1/2	7 ³ / ₈	8 1/4	9 1/4	10 1/8	11	12	12 ⁷ / ₈	13 ⁷ / ₈	14 ³ / ₄

FIGURE NO. 880V - TYPE B CONSTANT SUPPORTS

LUG DIMENSIONS C,W,J,X,
SEE CHART PAGE 26



GALVANIZED UNITS C880V SIZE 10-63

LOAD COUPLING
1 3/4" ϕ AND LARGER

To dimensions "L" add 3" for total travels 6 1/2" and over for 12" turnbuckle up to 1 1/2" rod size..

DIMENSIONS "L"

Hanger Size	Rod Size "R"						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	1/2	5/8	3/4	1	1 1/4	1 1/2	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	Available in Fig. 881H Only											
10-18	13	13 3/4	14 1/2	-	-	-	1 1/2-3 1/2	6	4-8	8 1/2	8 1/2-13 1/2	11 3/4
19-34	14 1/4	15	15 3/4	17 3/8	18 1/4	-	2-5	8 1/2	5 1/2-10	10 1/2	10 1/2-13 1/2	13 3/8
35-49	16	16 3/4	17 1/2	19 1/8	20	21 1/8	2 1/2-6	8 7/8	6 1/2-14	13 1/2	-	-
50-63	-	-	20 1/4	21 7/8	22 3/4	23 7/8	3-11	10 5/8	11 1/2-16	15 5/8	-	-
64-74	-	-	-	-	24	25 1/4	4-16	16 1/8	-	-	-	-
75-83	-	-	-	-	-	25 1/4	4-16	18 7/8	-	-	-	-
84-110	See Page 27											

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "H"

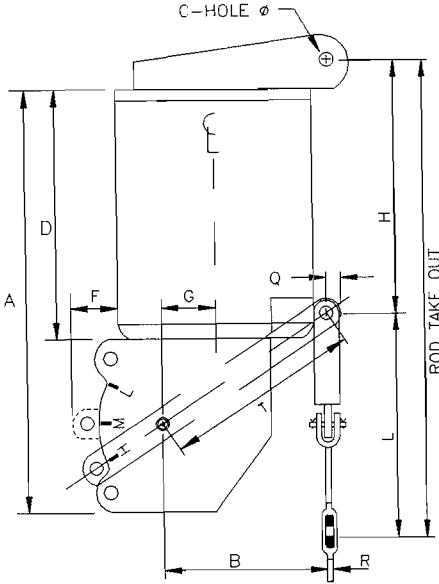
Hgr. Size	Total Travel																Apprx. Weight in Pounds				
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Net		Shipping	
1-9	Available in Fig. 881H Only																				
10-18	15 1/4	15	14 3/4	14 1/2	14	13 1/2	13	12 1/2	12	-	-	-	-	-	-	-	-	70	88	75	93
19-34	-	22 3/4	22 1/2	22 1/4	21 3/4	21 1/4	20 3/4	20 1/4	19 3/4	19 1/4	18 3/4	-	-	-	-	-	-	200	247	208	255
35-49	-	-	28 1/4	28	27 1/2	27	26 1/2	26	25 1/2	25	24 1/2	24	23 1/2	23	22 1/2	-	-	370	425	406	461
50-63	-	-	-	42	41 1/2	41	40 1/2	40	39 1/2	39	38 1/2	38	37 1/2	37	36 1/2	36	35 1/2	615	811	675	871
64-74	-	-	-	-	61	60 1/2	60	59 1/2	59	58 1/2	58	57 1/2	57	56 1/2	56	55 1/2	55	1475	1475	1575	1575
75-83	-	-	-	-	60 1/4	59 3/4	59 1/4	58 3/4	58 1/4	57 3/4	57 1/4	56 3/4	56 1/4	55 3/4	55 1/4	54 3/4	54 1/4	2590	2590	2690	2690
84-110	See Page 27																				

DIMENSION "S" FOR SIZE 10-63 GALV. UNITS

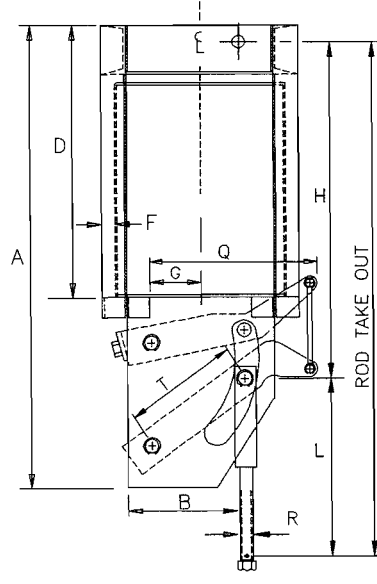
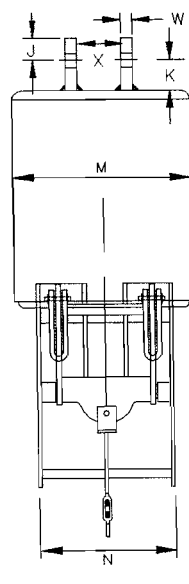
Hanger Size	10-18	19-34	35-49	50-63
S	1/8	1/4	1/2	1

FIGURE NO. 880V - TYPE C CONSTANT SUPPORTS

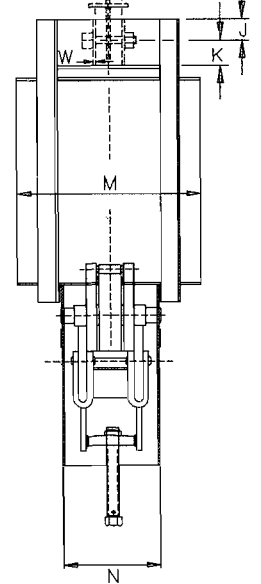
LUG DIMENSIONS C,W,J,X
SEE CHART PAGE 26



PAINTED UNITS SIZE 10 THRU 63



UNITS SIZE 64 THRU 83
PAINTED & GALVANIZED



GALVANIZED ORDER C880V

ROD CHART SEE PAGE 26

The 880V - Type C constant is a vertical unit for attaching to structural members with a pair of lugs provided. This allows the use of eyerods or a single plate for installation where limited headroom is encountered.

Notes: T = Total Travel

Units up to 1 1/2" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" Turnbuckles. Units with 1 3/4" rod or larger are furnished with load couplings.

Rod Take Out = H + L

ALL DIMENSIONS ARE IN INCHES

Size	Total Travel	A	D	F	G	M	N	K	Q	Dimensions for galv. C880V only							Std. Rod "R"
										A1	A2	A3	D1	U	Y	Z	
1-9	Available in Fig. 881H Only																
10-18	5" or less 5 1/2" or more	18 9/16	11 1/8	2	1 1/2	8 5/8	6 3/8	1 1/2	3/4	18 7/16	1/2	7/8	11 1/4	12	4 1/2	2 9/16	1/2 - 3/4
19-34	5" or less 5 1/2" or more	26 15/16	16 3/4	2 1/8	2 5/8	12 3/4	8 3/8	2	7/8	27 3/16	5/8	1 1/16	17	16 3/4	6 3/8	3 11/16	1/2 - 1 1/4
35-49	6" or less 6 1/2" or more	33 5/8	20 1/2	4 3/4	3 3/4	14	9 15/16	3	1 1/4	34 1/8	3/4	1 1/4	21	18	6 15/16	4	1/2 - 1 3/4
50-63	8" or less 8 1/2" or more	49	30	8 5/16	5 7/8	18	11 1/4	4	1 1/2	50	7/8	1 7/16	31	24	10 1/2	9 1/16	3/4 - 2 1/4
64-74	10 1/2" or less 11" or more	70 3/4	47 1/2	1 3/16	7 1/2	22 1/4	11	4 1/2	25 3/8	-	-	-	-	-	-	-	1 1/4 - 2 3/4
75-83	10 1/2" or less 11" or more	72 3/4	49 1/2	1 1/2	7 1/2	27 1/4	11	3 5/8	25 3/8	-	-	-	-	-	-	-	1 1/2 - 3 1/4*
84-110	See Page 27																

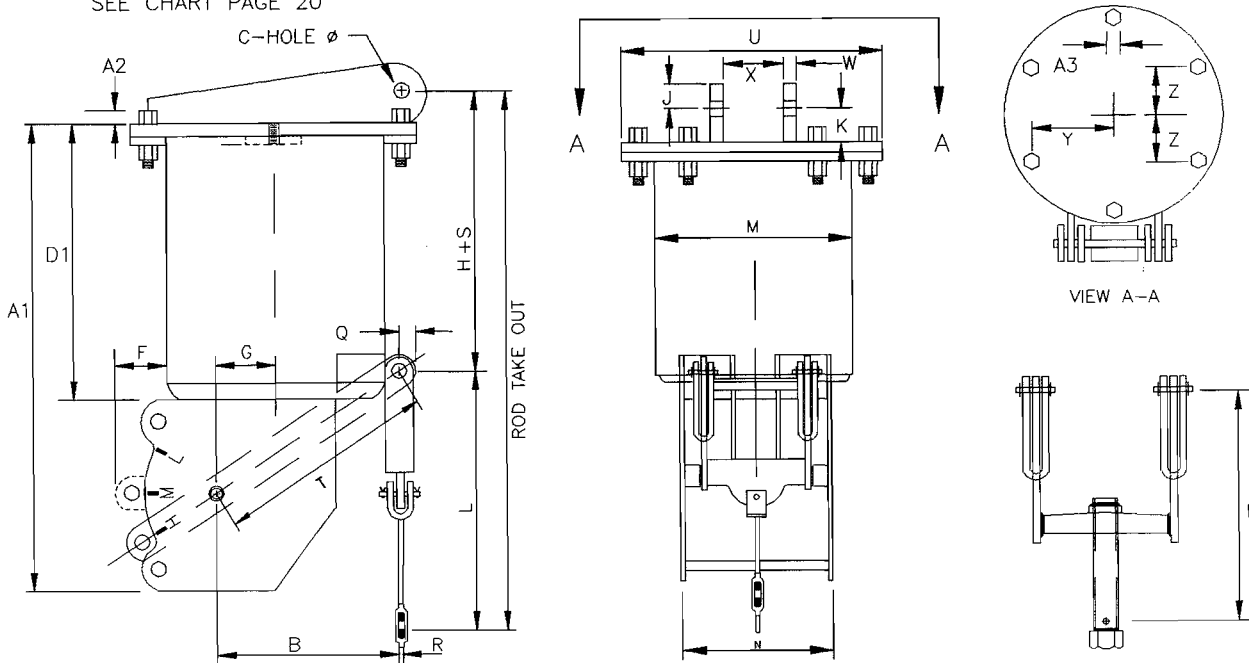
*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "B" AVERAGE INCHES

B	Total Travel																
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1 3/8	1 7/8	2 1/4	2 3/4	3 5/8	4 5/8	5 1/2	6 1/2	7 3/8	8 1/4	9 1/4	10 1/8	11	12	12 7/8	13 7/8	14 3/4

FIGURE NO. 880V - TYPE C CONSTANT SUPPORTS

LUG DIMENSIONS C,W,J,X,
SEE CHART PAGE 20



GALVANIZED UNIT C880V SIZE 10 THRU 63

LOAD COUPLING
1 3/4" ϕ ROD & LARGER

To dimensions "L" add 3" for total travels 6 1/2" and over for 12" turnbuckle up to 1 1/2" rod size.

DIMENSIONS "L"

Hanger Size	Rod Size "R"						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	1/2	5/8	3/4	1	1 1/4	1 1/2	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	Available in Fig. 881H Only											
10-18	13	13 3/4	14 1/2	-	-	-	1 1/2-3 1/2	6	4-8	8 1/2	8 1/2-13 1/2	11 3/4
19-34	14 1/4	15	15 3/4	17 3/8	18 1/4	-	2-5	8 1/2	5 1/2-10	10 1/2	10 1/2-13 1/2	13 3/8
35-49	16	16 3/4	17 1/2	19 1/8	20	21 1/8	2 1/2-6	8 7/8	6 1/2-14	13 1/2	-	-
50-63	-	-	20 1/4	21 7/8	22 3/4	23 7/8	3-11	10 5/8	11 1/2-16	15 5/8	-	-
64-74	-	-	-	-	24	25 1/4	4-16	16 1/8	-	-	-	-
75-83	-	-	-	-	-	25 1/4	4-16	18 7/8	-	-	-	-
84-110	See Page 27											

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "H"

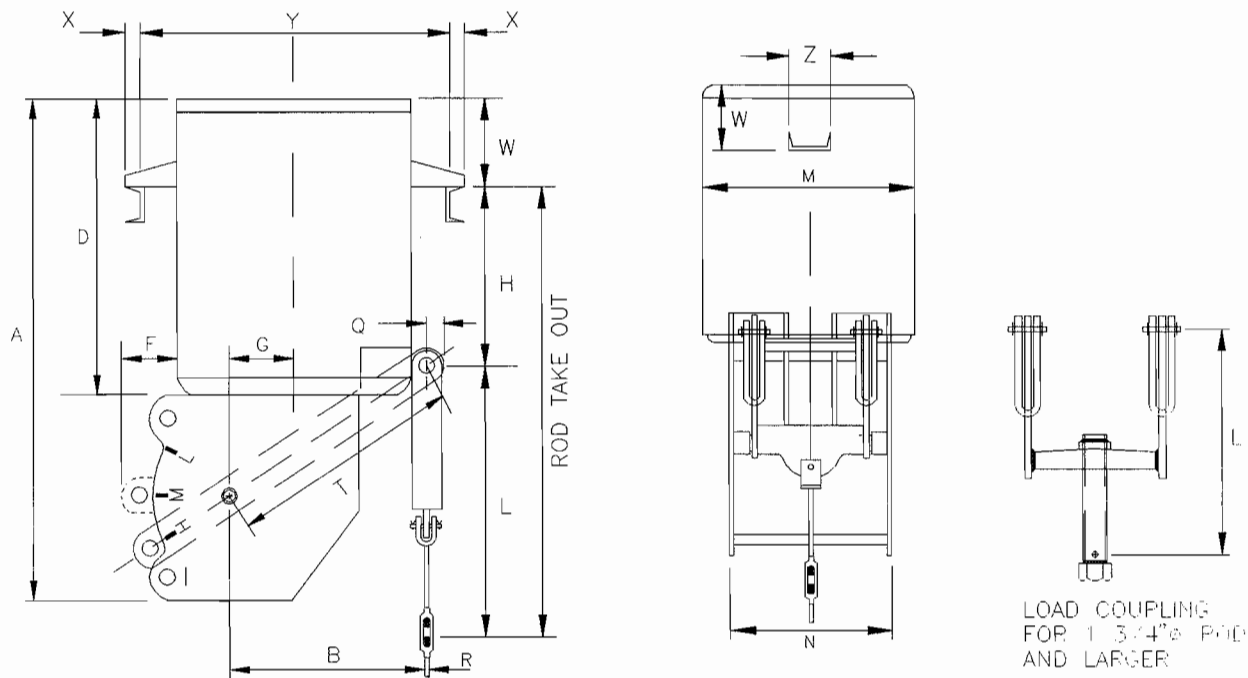
Apprx. Weight in Pounds

Hgr. Size	Total Travel																Net		Shipping		
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ptd	Galv	Ptd	Galv
1-9	Available in Fig. 881H Only																				
10-18	15 1/4	15	14 3/4	14 1/2	14	13 1/2	13	12 1/2	12	-	-	-	-	-	-	-	-	70	88	75	93
19-34	-	22 3/4	22 1/2	22 1/4	21 3/4	21 1/4	20 3/4	20 1/4	19 3/4	19 1/4	18 3/4	-	-	-	-	-	-	200	247	208	255
35-49	-	-	28 1/4	28	27 1/2	27	26 1/2	26	25 1/2	25	24 1/2	24	23 1/2	23	22 1/2	-	-	370	425	406	461
50-63	-	-	-	42	41 1/2	41	40 1/2	40	39 1/2	39	38 1/2	38	37 1/2	37	36 1/2	36	35 1/2	615	811	675	871
64-74	-	-	-	-	61	60 1/2	60	59 1/2	59	58 1/2	58	57 1/2	57	56 1/2	56	55 1/2	55	1475	1475	1575	1575
75-83	-	-	-	-	60 1/4	59 3/4	59 1/4	58 3/4	58 1/4	57 3/4	57 1/4	56 3/4	56 1/4	55 3/4	55 1/4	54 3/4	54 1/4	2590	2590	2690	2690
84-110	See Page 27																				

DIMENSION "S" FOR SIZE 10-63 GALV. UNITS

Hanger Size	10-18	19-34	35-49	50-63
S	1/8	1/4	1/2	1

FIGURE NO. 880V - TYPE D CONSTANT SUPPORTS



UNITS SIZE 10 THRU 63
PAINTED & GALVANIZED

GALVANIZED ORDER C880V

ROD CHART SEE PAGE 26

The 880V - Type D constant is a vertical unit which rests on top of structural members by channels provided on the sides of the unit. The depth of the beam is determined by dimension H minus Q or D minus W whichever is less.

Notes: T = Total Travel

Units up to 1 1/2" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" Turnbuckles. Units with 1 3/4" rod or larger are furnished with load couplings.

Rod Take Out = H + L

ALL DIMENSIONS ARE IN INCHES

Size	Total Travel	A	D	F	G	M	N	Q	Std. Rod "R"	W	X	Y	Z
1-9	Available in Fig. 881H Only												
10-18	5" or less 5 1/2" or more	18 9/16	11 1/8	2	1 1/2	8 5/8	6 3/8	3/4	1/2 - 3/4	2 3/8	1 1/2	10 3/4	3
19-34	5" or less 5 1/2" or more	26 15/16	16 3/4	2 1/8	2 5/8	12 3/4	8 3/8	7/8	1/2 - 1 1/4	2 3/8	1 1/2	14 7/8	3
35-49	6" or less 6 1/2" or more	33 5/8	20 1/2	4 3/4	3 3/4	14	9 15/16	1 1/4	1/2 - 1 3/4	2 5/8	2	16 3/4	4
50-63	8" or less 8 1/2" or more	49	30	8 5/16	5 7/8	18	11 1/4	1 1/2	3/4 - 2 1/4	2 7/8	3	21	6
64-74	Available in Fig. 881H Only												
75-83	Available in Fig. 881H Only												
84-110	Not Available												

FIGURE NO. 880V - TYPE D CONSTANT SUPPORTS

DIMENSIONS "B" AVERAGE INCHES

	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1⅜	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7⅞	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to 1½" rod size.

DIMENSIONS "L"

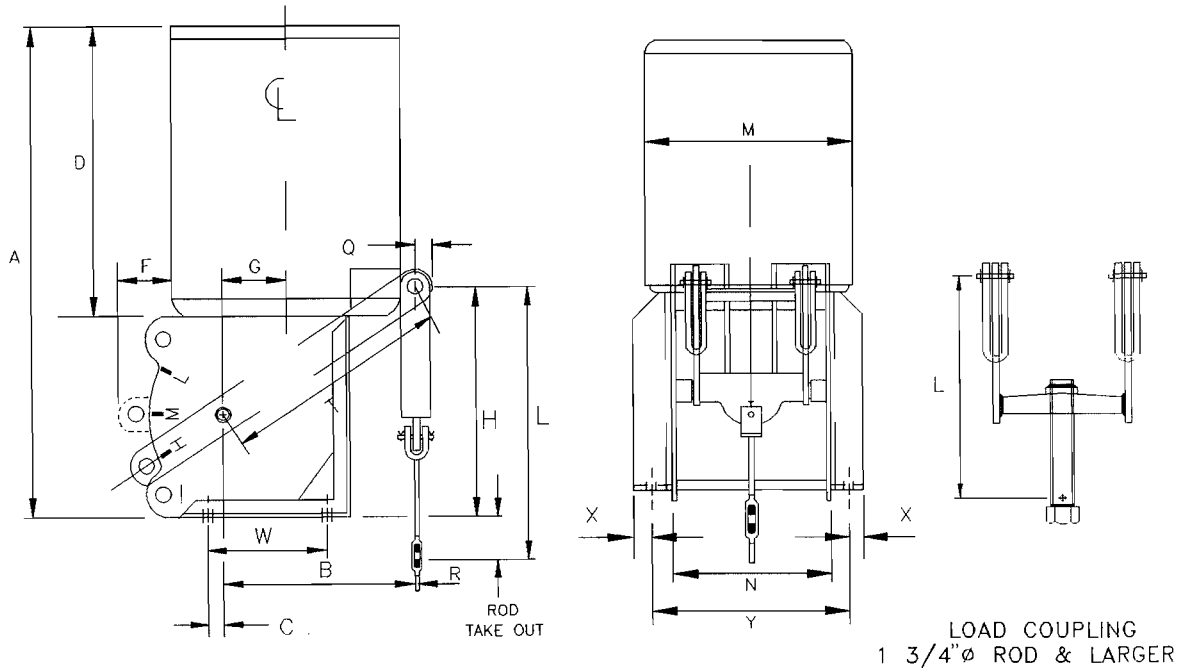
Hanger Size	Rod Size "R"						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"						
	½	⅝	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.	
1-9	Available in Fig. 881H Only												
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾	
19-34	14¼	15	15¾	17⅞	18¼	-	2-5	8½	5½-10	10½	10½-13½	13⅞	
35-49	16	16¾	17½	19½	20	21½	2½-6	8⅞	6½-14	13½	-	-	
50-63	-	-	20¼	21⅞	22¾	23⅞	3-11	10⅞	11½-16	15⅝	-	-	
64-74	Available in Fig. 881H Only												
75-83	Available in Fig. 881H Only												
84-110	Not Available												

*3¼" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS "H"

Hgr. Size	Total Travel																Apprx. Weight in Pounds		
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Net Ptd & Galv	Shipping Ptd & Galv
1-9	Available in Fig. 881H Only																		
10-18	11½	11¼	11	10¾	10¼	9¾	9¼	8¾	8¼	-	-	-	-	-	-	-	-	70	75
19-34	-	18½	18¼	18	17½	17	16½	16	15½	15	14½	-	-	-	-	-	-	200	208
35-49	-	-	22½	22¼	21¾	21¼	20¾	20¼	19¾	19¼	18¾	18¼	17¾	17¼	16¾	-	-	370	406
50-63	-	-	-	35	34½	34	33½	33	32½	32	31½	31	30½	30	29½	29	28½	615	675
64-74	Available in Fig. 881H Only																		
75-83	Available in Fig. 881H Only																		
84-110	Not Available																		

FIGURE NO. 880V - TYPE E CONSTANT SUPPORTS



UNITS SIZE 10 THRU 83
PAINTED & GALVANIZED

ROD CHART SEE PAGE 26

GALVANIZED ORDER C880V

The 880V - Type E constant is a vertical unit which rests on top of structural members. This unit provides easy installation from above the supporting steel. If the calculated rod take out is less than the depth of the supporting steel the load rod or load coupling can be lengthened if specified.

Notes: T = Total Travel

Units up to 1 1/2" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" Turnbuckles. Units with 1 3/4" rod or larger are furnished with load couplings.

Rod Take Out = L - H

ALL DIMENSIONS ARE IN INCHES

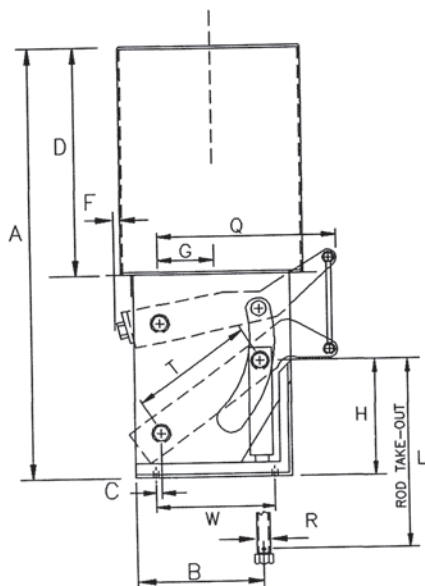
Size	Total Travel	A	C	D	F	G	M	N	Q	Std. Rod "R"	W	X	Y	Bracket Hole Dia
1-9		Not Available												
10-18	5" or less 5 1/2" or more	18 9/16	1 1/2	11 1/8	2	1 1/2	8 5/8	6 3/8	3/4	1/2 - 3/4	4 5/16	5/8	8 1/16	3/4
19-34	5" or less 5 1/2" or more	26 15/16	1 13/16	16 3/4	2 1/8	2 5/8	12 3/4	8 3/8	7/8	1/2 - 1 1/4	6 1 1/16	5/8	10 3/16	3/4
35-49	6" or less 6 1/2" or more	33 5/8	1 7/8	20 1/2	4 3/4	3 3/4	14	9 15/16	1 1/4	1/2 - 1 3/4	8 5/16	13/16	12 3/8	7/8
50-63	8" or less 8 1/2" or more	49	3 3/4	30	8 5/16	5 7/8	18	11 1/4	1 1/2	3/4 - 2 1/4	12 13/16	1 5/16	14 1 1/16	1 3/8
64-74	10 1/2" or less 11" or more	70 3/4	3/8	47 1/2	1 3/16	7 1/2	22 1/4	11	25 3/8	1 1/4 - 2 3/4	15 3/4	1 9/16	14 15/16	1 5/8
75-83	10 1/2" or less 11" or more	72 3/4	5 1/4	49 1/2	1 1/2	7 1/2	27 1/4	11	25 3/8	1 1/2 - 3 1/4*	25 5/8	1 3/4	15 1/2	1 5/8
84-110		See Page 27												

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

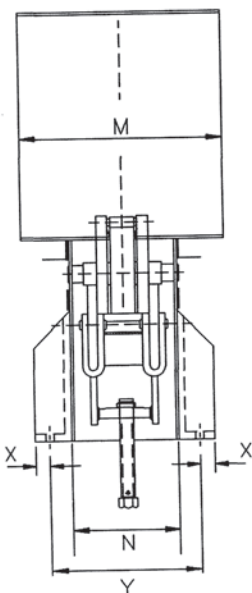
ANGLE BRACKET DIMENSIONS

Hanger Size	10 - 18	19 - 34	35 - 49	50 - 63	64 - 74	75 - 83
Bolt Hole Dia. Max.	3/4	3/4	7/8	1 3/8	1 5/8	1 5/8
Angle Size	1 1/2 x 1 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4	2 x 2 x 3/8	3 x 3 x 3/8	3 1/2 x 3 1/2 x 1/2	4 x 4 x 3/8

FIGURE NO. 880V - TYPE E CONSTANT SUPPORTS

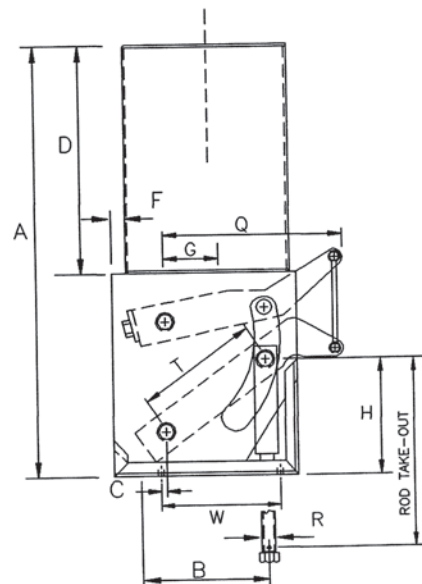


UNITS SIZE 64 THRU 74



PAINTED & GALVANIZED UNITS

GALVANIZED UNITS ORDER C880V



UNITS SIZE 75 THRU 83

DIMENSIONS "B" AVERAGE INCHES

B	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1⅜	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7¾	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to 1½" rod size.

DIMENSIONS "L"

Hanger Size	Rod Size "R"						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"						
	½	⅝	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.	
1-9	Available in Fig. 881H Only												
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾	
19-34	14¼	15	15¾	17¾	18¼	-	2-5	8½	5½-10	10½	10½-13½	13¾	
35-49	16	16¾	17½	19⅞	20	21⅞	2½-6	8⅞	6½-14	13½	-	-	
50-63	-	-	20¼	21⅞	22¾	23⅞	3-11	10⅝	11½-16	15⅝	-	-	
64-74	-	-	-	-	-	17	4-16	16⅞	-	-	-	-	
75-83	-	-	-	-	-	19¾	4-16	18⅞	-	-	-	-	
84-110	See Page 27												

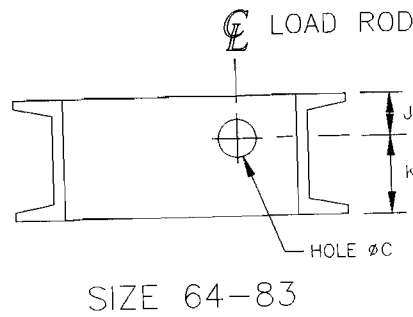
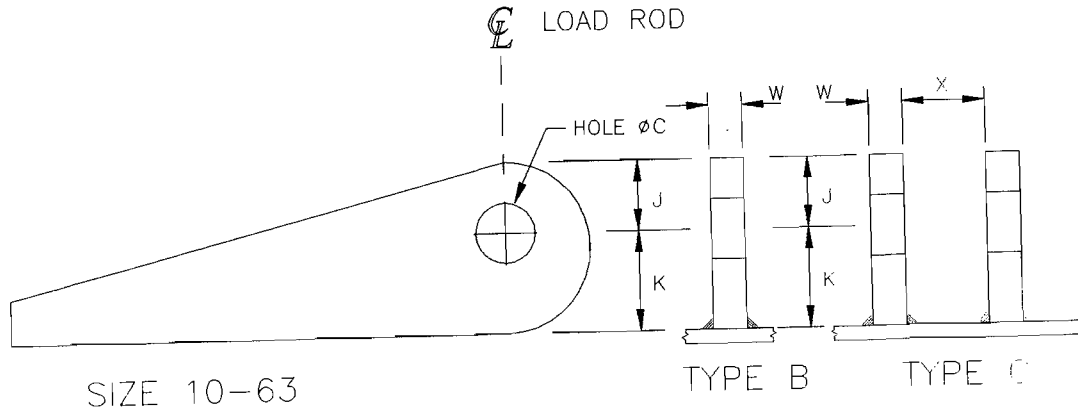
*3¼" is furnished with 8UN series threads, 3" and maller are National Coarse Thread Series.

DIMENSIONS "H"

Apprx. Weight in Pounds

Hgr. Size	Total Travel																Net		Shipping	
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Ptd & Galv	Ptd & Galv	
1-9	Available in Fig. 881H Only																			
10-18	4⅝	5	5¼	5½	6	6½	7%	7%	8%	-	-	-	-	-	-	-	-	70	75	
19-34	-	6	6¼	6⅝	7⅞	7%	8¼	8¼	9¼	9%	10%	-	-	-	-	-	-	200	208	
35-49	-	-	8	8¼	8%	9¼	9%	10%	11	11½	12	12½	13	13%	14⅞	-	-	370	406	
50-63	-	-	-	11⅞	11%	12⅞	12¾	13¼	13¾	14¼	14⅞	15%	15⅞	16½	17	14½	18	615	675	
64-74	-	-	-	-	9⅞	9%	10⅞	10¾	11¼	11¾	12¼	12⅞	13%	14	14½	15	15½	1475	1575	
75-83	-	-	-	-	9%	10⅞	10%	11¼	11¾	12¼	12%	13%	13⅞	14½	15	15½	16	2590	2690	
84-110	See Page 27																			

FIGURE NO. 880V - TYPE B & C LUGS AND ROD CHART - CONSTANT SUPPORTS



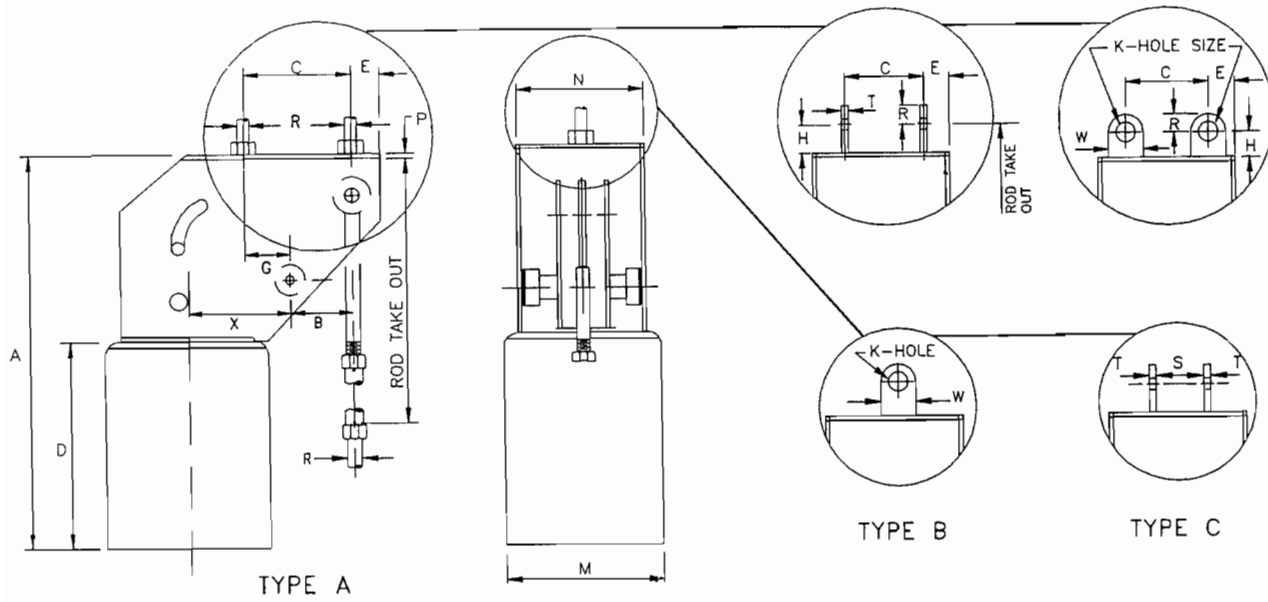
ALL DIMENSIONS ARE IN INCHES

Hanger Size	K	Type B W	Type C W
10 - 18	1½	¾	¾
19 - 34	2	⅝	⅝
35 - 49	3	¾	¾
50 - 63	4	1	1
64 - 74	4½	2	¾
75 - 83	3⅝	2½	1

Load Lb	0 800	801 1500	1501 2540	2541 4000	4001 6100	6101 9400	9401 13400	13401 18300	18301 24700	24701 31000	31001 39000	39001 48000	48001 58000
Rod Size "R"	½	⅝	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3	3¼*
C	¾	⅞	1	1¼	1½	1¾	2	2⅜	2⅝	2⅞	3⅛	3⅜	3⅝
X	⅞	1	1¼	1⅝	2	2⅜	2⅝	2⅞	3⅛	3⅜	3⅝	3⅞	4⅛
J	1¼	1¼	1¼	1½	2	2½	2½	3	3	3¾	3¾	3¾	3¾

*3¼ is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

FIGURE NO. 880V - TYPE A, B, C SIZES 84-110 CONSTANT SUPPORTS



UNITS SIZE 84 THRU 110

PAINTED & GALVANIZED UNITS
GALVANIZED UNITS ORDER C880V

SEE PAGE 46 FOR ROD AND LUG CHART

Type A, B, and C sizes 84-110 are designed for larger loads and long travels. They are basically the same style of upper attachments as our sizes 10-83 shown on pages 16 through 20.

ALL DIMENSIONS ARE IN INCHES

Hgr. Size	Total Travel	A	S		D	E		G		M	N	P	X	Factor**	
			Type A&B	Type C		Type A&B	Type C	Type A&B	Type C					Type A	Type B&C
84-94	9½ or less 10 or more	78¾	16	15	49¾	4	4½	1½	1	24	10½	3	12	45¾ 55½	54¾ 64½
95-110	14 or less 14½ or more	100	24	23	64	4	4½	7½	1	24	11½	3½	13½	56½ 65⅜	66 74⅞

WEIGHTS ARE IN POUNDS

Hanger Size	R-Rod			Approx. Weights	
	Min. Thd. Lgth.	Rod Dia. Min.	Rod Dia. Max.	Net	Shipping
84-94	10 13	2	3¾*	3255	3375
95-110	12 15	2½	3¾*	5800	5950

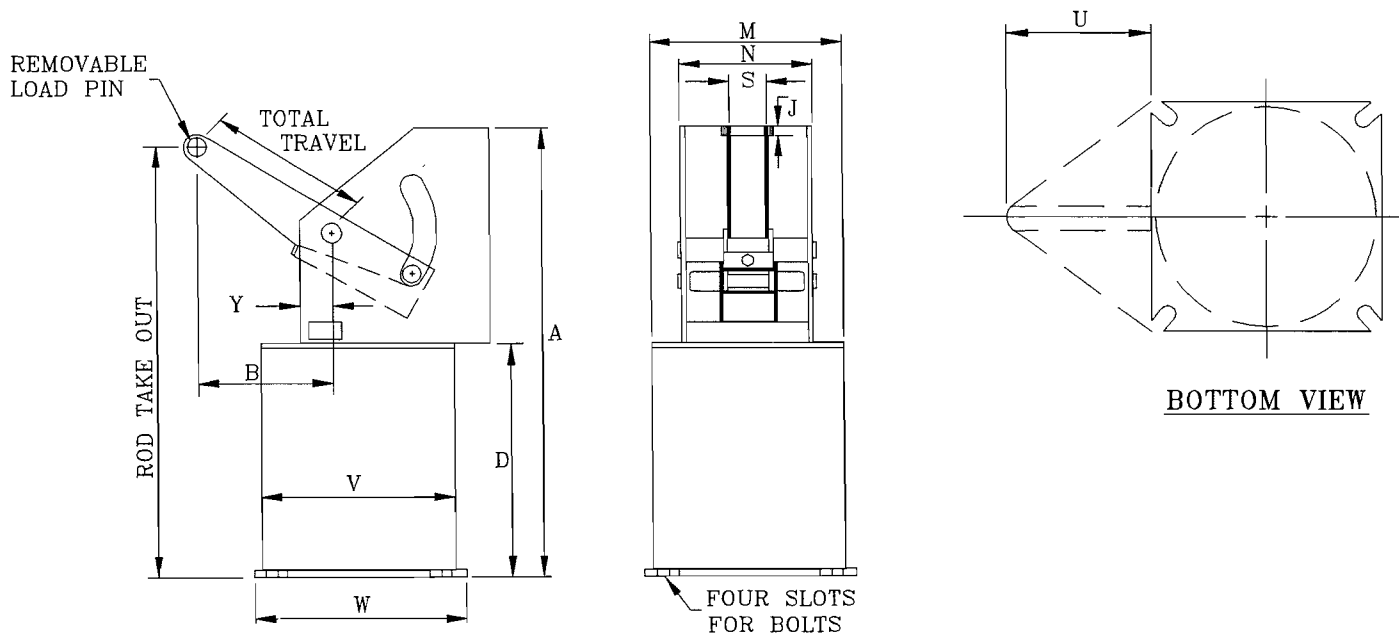
*¾ diameter rods and larger are furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

** Rod Take Out = (Factor) minus (.75 x Total Travel)

DIMENSIONS "B"

B	Total Travel																		
	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½							
B	4⅜	4⅞	5	5⅜	5⅞	6¼	6⅝	7⅞	7½	7⅞	8⅞	8¾							
B	Total Travel																		
	11	11½	12	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18	18½	19	19½	20
B	9⅞	9⅞	10	10⅜	10⅞	11⅞	11⅞	12⅞	12⅞	12⅞	13⅞	13⅞	14⅞	14⅞	14⅞	15⅞	15⅞	16⅞	16⅞

FIGURE NO. 880V - TYPE F CONSTANT SUPPORT



UNITS SIZE 10 THRU 63

PAINTED & GALVANIZED UNITS

GALVANIZED UNITS ORDER C880V

The 880V - Type F is for support of piping or equipment from below. It has a base flange for fastening to the floor or to beams. The load arm is furnished with a removable load pin. The intermediate strut which runs from the load arm to the piping is not furnished and must be ordered separately, designed to the specific requirements. (See page 29 for struts)

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

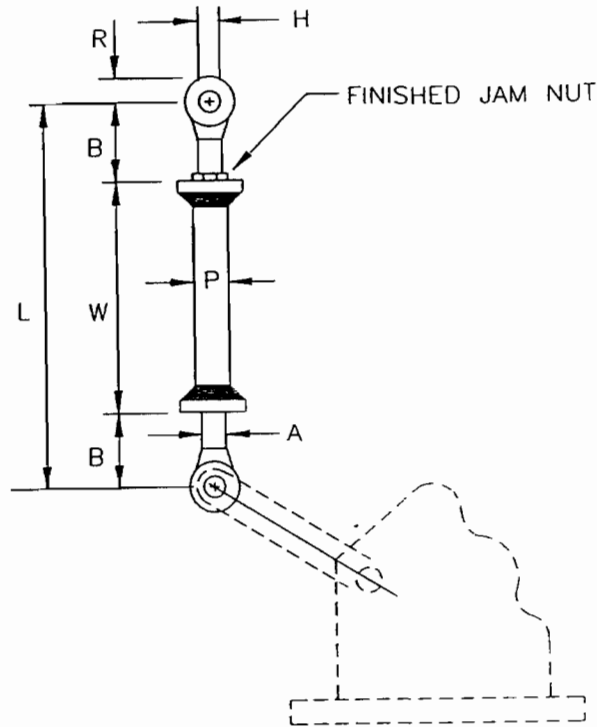
Hgr. Size	Total Travel	A	D	G	M	N	S	Y	Z	Bttm. Flg. Sq.	Fig. Bolt Circle	Fig. Hole Dia.	Fig. Thck.	Factor*	Pin	Apprx. Wgt.	
																Net	Shipping
1-9	Not Available																
10-18	5½ or less 6 or more	18½	10⅝	1½	8⅝	6¼	1	1	27/32	9	10	7/16	¼	12⅝	¾ 1½	70	75
19-34	4 or less 4½ or more	27½	17	2⅝	12¾	8⅜	1⅝	1	1¼	13	15	⅝	⅜	20⅞	1⅞ 7/8	195	203
35-49	7 or less 7½ or more	35	20⅞	3⅞	14	9⅝	2¼	1½	1⅝	14½	17	7/8	⅝	25½	1½ 1⅞	360	372
50-63	8 or less 8½ or more	50⅝	30½	5⅞	18	11¼	2¼	1⅝	2	18½	21	1⅞	¾	38½	2 1½	745	805
64-110	Not Available																

*Rod Take-Out = Factor plus ½ total travel.

DIMENSIONS "B"

	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1⅜	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7⅜	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

STRUT FIGURE NO. 520 FOR USE WITH FIGURE NO. 880V - TYPE F CONSTANT SUPPORT



¹ Material Specification ASTM A-53 GR.B or ASTM A-106 GR.B

ALL DIMENSIONS ARE IN INCHES

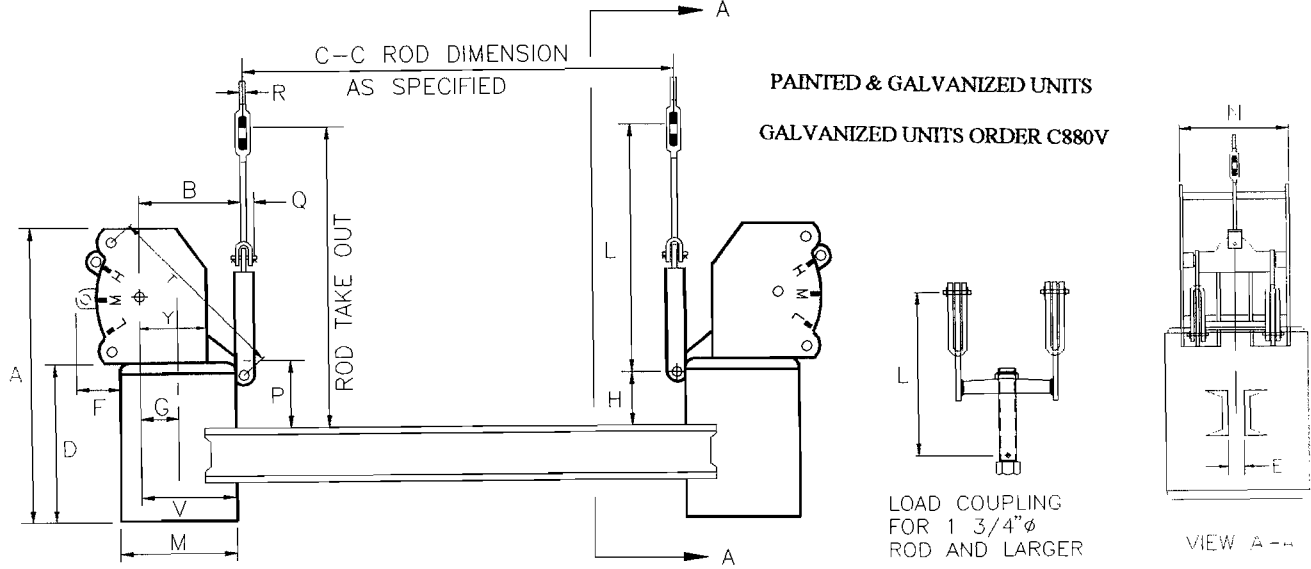
Size No.	Constant Support		A	B*	Pipe Size P ¹	H	R	L	
	Size	Total Travel						Min.	Max.
1	10-18	5½ or less	7/8	2	1¼ x H	25/32	1	12¼	72
2		6 or more	¾	2	1¼ x H	17/32	1	14¾	72
3	19-34	4 or less	1¼	2½	2 x H	15/32	1½	13¼	72
4		4½ or more	1½	2½	1½ x H	29/32	1	17¾	72
5	35-49	7 or less	1½	3¾	2½ x H	117/32	15/8	18¼	72
6		7½ or more	1½	2½	2 x H	15/32	1½	23¼	72
7	50-63	8 or less	2	4½	3 x H	2½/32	115/16	22¼	72
8		8½ or more	1½	3¾	2½ x H	117/32	15/8	27¼	72

*B dimension shown is based on the hanger in the high position and allows adjustment through the entire travel range.

$W = L \text{ minus } 2B$

To Order Specify: Figure No. 520 Strut, (size Number) and (W Dimension).

FIGURE NO. 880V - TYPE G CONSTANT SUPPORTS



UNITS SIZE 10 THRU 63

SEE PAGE 26 FOR ROD CHART

The 880V Type G is a vertical pair of constants furnished as a complete trapeze assembly. The pair of constants are welded to a pair of back to back channels at each end to the hanger casing. Each constant carries one-half of the total load. In addition to the load to be supported the hanger assemblies weight must be added for the sum total of the load supported.

To properly select the hanger size take one-half the load to support and select the hanger size from the load travel charts (pages 8-15), next add one-half the hanger weight (see below) for the size unit selected. If this sum is greater than the maximum load at the required travel for the hanger size selected, then it will be necessary to go to the next larger hanger.

In certain applications the load may not be centered on the trapeze channel. In this situation careful calculations will be required to size the individual constants since one constant will carry a greater load than the other.

The C - C dimension must be specified when ordering. Calculate the minimum C - C dimension by the following:

If B plus Q is greater than Y; then C-C=O.D. of pipe covering plus 2Q.
 If B plus Q is less than Y; then C-C=O.D. of pipe covering plus 2(Y minus B).

Note: If u-bolt is used to fasten pipe to channels, C - C of u-bolt tangent plus one washer plate width cannot be greater than C - C of the hanger rods minus 2(V minus B).

The constant assembly up to 1½" dia. rods with total travels of 6" and less are furnished with 6" turnbuckles. Units with 6½" and larger total travels are furnished with 12" turnbuckles. Units with 1¾" dia. rods and larger are furnished with load couplings.

Rod Take Out = H + L

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Size	A	D	E	F	G	M	N	P	Q	V	Y	Channel Size	"R" Rod	Apprx. Wgt.**
1-9	Not Available													
10-18	18 ⁹ / ₁₆	11 ¹ / ₈	1	2	1 ¹ / ₂	8 ⁵ / ₈	6 ³ / ₈	2 ⁹ / ₁₆	3 ¹ / ₂	5 ¹³ / ₁₆	3 ¹⁵ / ₁₆	4 @ 5.4 lb/ft	½ - ¾	70
19-34	26 ¹⁵ / ₁₆	16 ³ / ₄	1 ¹ / ₄	2 ¹ / ₈	2 ⁵ / ₈	12 ³ / ₄	8 ³ / ₈	3 ⁹ / ₁₆	4	9	6 ¹ / ₈	6 @ 10.5 lb/ft	½ - 1 ¹ / ₄	200
35-49	33 ³ / ₈	20 ¹ / ₂	1 ¹ / ₂	4 ³ / ₄	3 ³ / ₄	14	9 ¹⁵ / ₁₆	3 ⁷ / ₁₆	5 ¹ / ₂	10 ³ / ₄	8	10 @ 15.3 lb/ft	½ - 1 ³ / ₄	370
50-63	49	30	2 ¹ / ₈	8 ⁵ / ₁₆	5 ⁷ / ₈	18	11 ¹ / ₄	4	6 ¹ / ₂	14 ³ / ₄	10 ¹⁵ / ₁₆	12 @ 20.7 lb/ft	¾ - 2 ¹ / ₄	615
64-110	Not Available													

3" and smaller are National Coarse Thread Series

**Weights are for Individual Constants

DIMENSIONS "B" AVERAGE INCHES

	Total Travel																
	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1 ³ / ₈	1 ⁷ / ₈	2 ¹ / ₄	2 ³ / ₄	3 ⁵ / ₈	4 ⁵ / ₈	5 ¹ / ₂	6 ¹ / ₂	7 ³ / ₈	8 ¹ / ₄	9 ¹ / ₄	10 ¹ / ₈	11	12	12 ⁷ / ₈	13 ³ / ₈	14 ³ / ₄

FIGURE NO. 880V - TYPE G CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to 1½" rod size.

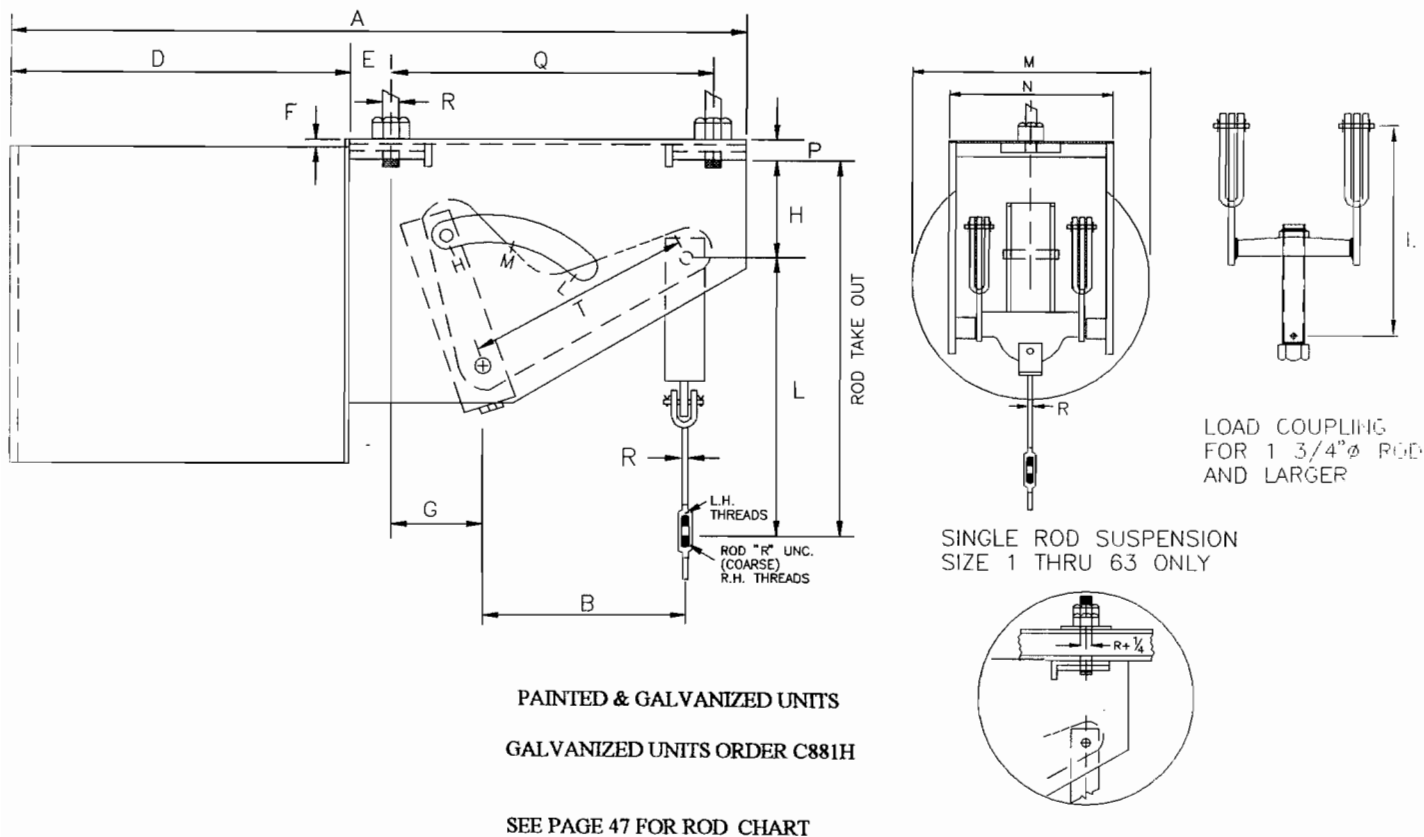
DIMENSIONS "L"

Hanger Size	Rod Size "R"								
	½	⅝	¾	1	1¼	1½	1¾	2	2¼
1-9	Not Available								
10-18	13	13¾	14½	-	-	-	-	-	-
19-34	14¼	15	15¾	17¾	18¼	-	-	-	-
35-49	16	16¾	17½	19½	20	21½	8¾	-	-
50-63	-	-	20¼	21¾	22¾	23¾	11	11	11
64-110	Not Available								

DIMENSIONS "H"

Hgr. Size	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	Not Available																
10-18	6¾	6½	6¼	6	5½	5	4½	4	3½	-	-	-	-	-	-	-	-
19-34	-	9½	9¼	9	8½	8	7½	7	6½	6	5½	-	-	-	-	-	-
35-49	-	-	11¼	11	10½	10	9½	9	8½	8	7½	7	6½	6	5½	-	-
50-63	-	-	-	16	15½	15	14½	14	13½	13	12½	12	11½	11	10½	10	9½
64-110	Not Available																

FIGURE NO. 881H - TYPE A CONSTANT SUPPORTS



The 881-H Type A constant is a horizontal unit for attaching to structural members by installing 2 threaded rods into the tapped holes, dimension "R", provided in the top of the unit. Proper engagement of the rod is equal to "P" + 3/8 of an inch.

Notes: T=Total Travel

Turnbuckles are furnished up to 1 1/2" rod size.

Units with total travels of 6" and less are furnished with 6" turnbuckles. Units with total travels of 6 1/2" and larger are furnished with 12" turnbuckles. Units with 1 3/4" rod size and larger are furnished with load couplings.

Rod Take Out = H + L

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Size	Total Travel	A	Q	D	E	F	G	M	N	P	Standard Rod R	Apprx. Wgt.	
												Net	Shipping
1-9	4" or less 4 1/2" or more	14 18	6 10	6	1	7/8	2	6 1/4	4 1/4	7/8	1/2	25	27
10-18	5" or less 5 1/2" or more	20 3/8 23 3/8	8 11	10 3/8	1	5/16	2 9/16	8 5/8	5 7/8	3/4	1/2 - 3/4	70	75
19-34	5" or less 5 1/2" or more	28 1/16 32 3/16	10 14 1/8	15 9/16	1 1/4	9/16	3 7/8	12 1/2	8 3/8	1 1/8	1/2 - 1 1/4	200	208
35-49	6" or less 6 1/2" or more	33 3/8 41 3/8	11 19	18 7/8	1 3/4	3/4	4 3/4	13 3/4	9 15/16	1 3/8	1/2 - 1 3/4	368	380
50-63	8" or less 8 1/2" or more	48 1/8 56 1/8	16 24	28 3/4	1 11/16	15/16	7 11/16	17 7/8	11 1/4	1 3/4	3/4 - 2 1/4	758	818
64-74	10 1/2" or less 11" or more	60 3/4 66 1/4	15 3/4 21 1/4	39	3	3 1/4	5 1/4	22 1/4	11	3 1/2	1 1/4 - 2 3/4	1773	1873
75-83	10 1/2" or less 11" or more	60 3/4 66 1/4	15 1/4 20 3/4	39	3 1/4	3 1/2	5	27 1/2	11	4 1/4	1 1/2 - 3 1/4*	2605	2705
84-110													

See Page 48

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

FIGURE NO. 881H - TYPE A CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to and including 1½" rod size.

DIMENSION "L"

Hanger Size	Rod Size						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	½	⅝	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	6¼	-	-	-	-	-	-	-	-	-	-	-
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾
19-34	14¼	15	15¾	17¾	18¼	-	2-5	8½	5½-10	10½	10½-13½	13¾
35-49	16	16¾	17½	19½	20	21½	2½-6	8¾	6½-14	13½	-	-
50-63	-	-	20¼	21¾	22¾	23¾	3-11	10⅝	11½-16	15⅝	-	-
64-74	-	-	-	-	24	25¼	4-16	16⅞	-	-	-	-
75-83	-	-	-	-	-	25¼	4-16	18⅞	-	-	-	-
84-110	See Page 48											

*3¼" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

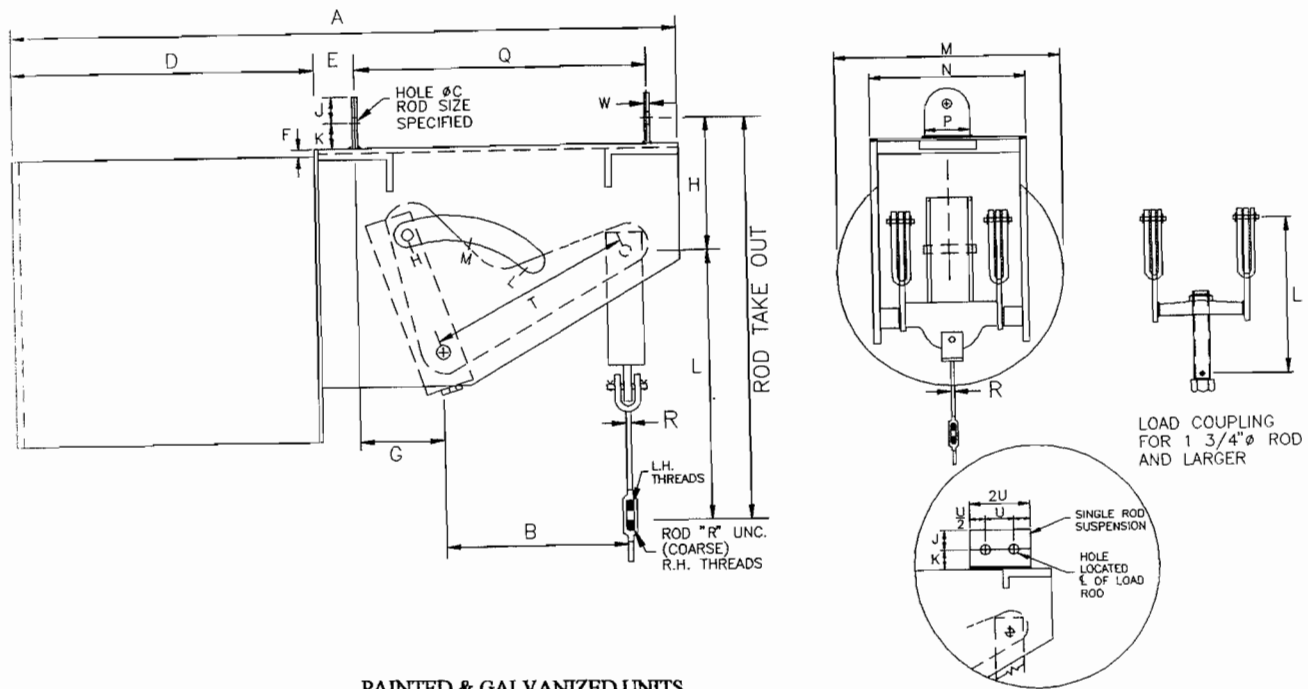
DIMENSION "H"

Hgr. Size	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	3¾	3½	3¼	3	2½	2	1½	1	½	-	-	-	-	-	-	-	-
10-18	4½	4¼	4	3¾	3¼	2¾	2¼	1¾	1¼	-	-	-	-	-	-	-	-
19-34	-	7¼	7	6¾	6¼	5¾	5¼	4¾	4¼	3¾	3¼	-	-	-	-	-	-
35-49	-	-	8½	8¼	7¾	7¼	6¾	6¼	5¾	5¼	4¾	4¼	3¾	3¼	2¾	-	-
50-63	-	-	12¼	12	11½	11	10½	10	9½	9	8½	8	7½	7	6½	6	5½
64-74	-	-	-	-	16¼	15¾	15¼	14¾	14¼	13¾	13¼	12¾	12¼	11¾	11¼	10¾	10¼
75-83	-	-	-	-	18½	18	17½	17	16½	16	15½	15	14½	14	13½	13	12½
84-110	See Page 48																

DIMENSION "B" AVERAGE INCHES

B	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1⅜	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7⅞	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

FIGURE NO. 881H - TYPE B CONSTANT SUPPORTS



PAINTED & GALVANIZED UNITS

GALVANIZED UNITS ORDER C881H

SEE PAGE 47 FOR ROD AND LUG CHART

The 881-H Type B constant is a horizontal unit for attaching to structural members by one lug at each end of the frame. The lugs are compatible with Welded Beam Attachment, Forged Steel Clevis or Angle Clips where limited headroom is encountered.

Notes: T=Total Travel

Units with total travels of 6" and less are furnished with 6" turnbuckles. Turnbuckles are furnished up to 1 1/2" rod size. Units with total travels of 6 1/2" and larger are furnished with 12" turnbuckles. Units with 1 3/4" rod size and larger are furnished with load couplings.

Rod Take Out = H + L

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Size	Total Travel	A	Q	D	E	F	G	M	N	K	Standard Rod R	Apprx. Wgt.	
												Net	Shipping
1-9	4" or less 4 1/2" or more	14 18	5 1/2 9 1/2	6	1 1/4	7/8	2	6 1/4	4 1/4	1 1/2	1/2	25	27
10-18	5" or less 5 1/2" or more	20 3/8 23 3/8	7 1/2 10 1/2	10 3/8	1 1/4	5/16	2 9/16	8 5/8	5 7/8	1 1/2	1/2 - 3/4	70	75
19-34	5" or less 5 1/2" or more	28 1/16 32 3/16	9 3/4 13 7/8	15 9/16	1 3/8	9/16	3 7/8	12 1/2	8 3/8	2	1/2 - 1 1/4	200	208
35-49	6" or less 6 1/2" or more	33 3/8 41 3/8	10 1/2 18 1/2	18 7/8	2	3/4	4 3/4	13 3/4	9 15/16	3	1/2 - 1 3/4	368	380
50-63	8" or less 8 1/2" or more	48 1/8 56 1/8	13 3/8 21 3/8	28 3/4	3	15/16	7 11/16	17 7/8	11 1/4	4	3/4 - 2 1/4	758	818
64-74	10 1/2" or less 11" or more	60 3/4 66 1/4	15 1/4 20 3/4	39	3 1/4	3 1/4	5 1/4	22 1/4	11	4 1/2	1 1/4 - 2 3/4	1773	1873
75-83	10 1/2" or less 11" or more	60 3/4 66 1/4	14 3/4 20 1/4	39	3 1/2	3 1/2	5	27 1/2	11	5	1 1/2 - 3 1/4*	2605	2705
84-110	See Page 48												

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

FIGURE NO. 881H - TYPE B CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to and including 1½" rod size.

DIMENSION "L"

Hanger Size	Rod Size						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	½	5/8	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	6¼	-	-	-	-	-	-	-	-	-	-	-
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾
19-34	14¼	15	15¾	17¾	18¼	-	2-5	8½	5½-10	10½	10½-13½	13¾
35-49	16	16¾	17½	19½	20	21½	2½-6	8¾	6½-14	13½	-	-
50-63	-	-	20¼	21¾	22¾	23¾	3-11	10⅝	11½-16	15⅝	-	-
64-74	-	-	-	-	24	25¼	4-16	16⅞	-	-	-	-
75-83	-	-	-	-	-	25¼	4-16	18⅞	-	-	-	-
84-110	See Page 48											

*3¼" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

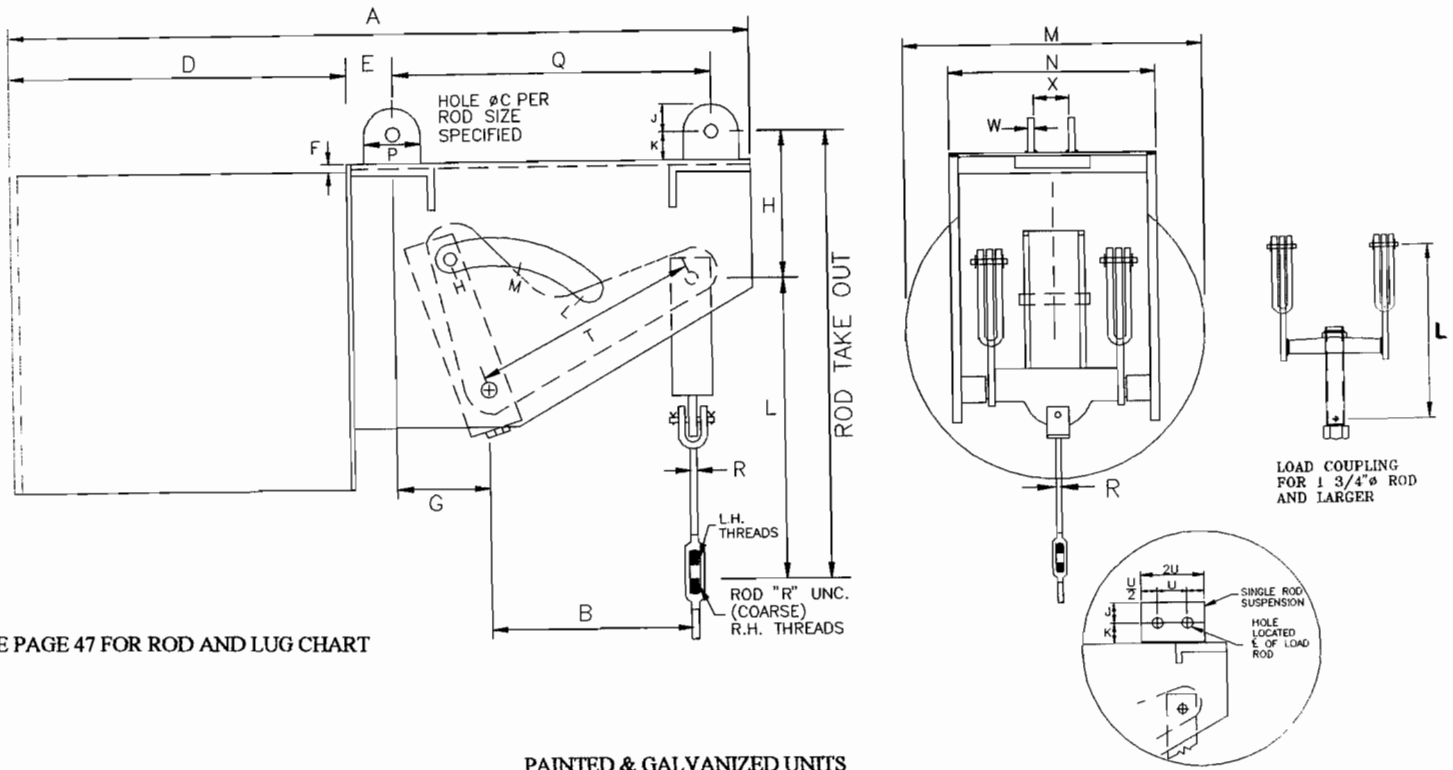
DIMENSION "H"

Hgr. Size	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	6	5¾	5½	5¼	4¾	4¼	3¾	3¼	2¾	-	-	-	-	-	-	-	-
10-18	6¾	6½	6¼	6	5½	5	4½	4	3½	-	-	-	-	-	-	-	-
19-34	-	10½	10¼	10	9½	9	8½	8	7½	7	6½	-	-	-	-	-	-
35-49	-	-	13	12¾	12¼	11¾	11¼	10¾	10¼	9¾	9¼	8¾	8¼	7¾	7¼	-	-
50-63	-	-	-	18	17½	17	16½	16	15½	15	14½	14	13½	13	12½	12	11½
64-74	-	-	-	-	24¼	23¾	23¼	22¾	22¼	21¾	21¼	20¾	20¼	19¾	19¼	18¾	18¼
75-83	-	-	-	-	27¾	27¼	26¾	26¼	25¾	25¼	24¾	24¼	23¾	23¼	22¾	22¼	21¾
84-110	See Page 48																

DIMENSION "B" AVERAGE INCHES

B	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1¾	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7¾	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

FIGURE NO. 881H - TYPE C CONSTANT SUPPORTS



SEE PAGE 47 FOR ROD AND LUG CHART

PAINTED & GALVANIZED UNITS
 GALVANIZED UNITS ORDER C881H

The 881-H Type C constant is a horizontal unit for attaching to **structural members** by one pair of lugs provided at each end of the frame. This arrangement is compatible with two eyerods or two single plates where limited headroom is encountered.

Notes: T=Total Travel

Units with total travels of 6" and less are furnished with 6" turnbuckles. Turnbuckles are furnished up to 1 1/2" rod size. Units with total travels of 6 1/2" and larger are furnished with 12" turnbuckles. Units with 1 3/4" rod size and larger are furnished with load couplings.

Rod Take Out = H + L

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Size	Total Travel	A	Q	D	E	F	G	M	N	K	Standard Rod R	Apprx. Wgt.	
												Net	Shipping
1-9	4" or less 4 1/2" or more	14 18	5 1/2 9 1/2	6	1 1/4	7/8	2	6 1/4	4 1/4	1 1/2	1/2	25	27
10-18	5" or less 5 1/2" or more	20 3/8 23 3/8	7 1/2 10 1/2	10 3/8	1 1/4	5/16	2 9/16	8 5/8	5 7/8	1 1/2	1/2 - 3/4	70	75
19-34	5" or less 5 1/2" or more	28 1/16 32 3/16	8 1/2 12 5/8	15 9/16	2	9/16	3 7/8	12 1/2	8 3/8	2	1/2 - 1 1/4	200	208
35-49	6" or less 6 1/2" or more	33 3/8 41 3/8	9 1/2 17 1/2	18 7/8	2 1/2	3/4	4 3/4	13 3/4	9 15/16	3	1/2 - 1 3/4	368	380
50-63	8" or less 8 1/2" or more	48 1/8 56 1/8	13 3/8 21 3/8	28 3/4	3	15/16	7 11/16	17 7/8	11 1/4	4	3/4 - 2 1/4	758	818
64-74	10 1/2" or less 11" or more	60 3/4 66 1/4	13 3/4 19 1/4	39	4	3 1/4	5 1/4	22 1/4	11	4 1/2	1 1/4 - 2 3/4	1773	1873
75-83	10 1/2" or less 11" or more	60 3/4 66 1/4	12 3/4 18 1/4	39	4 1/2	3 1/2	5	27 1/2	11	5	1 1/2 - 3 1/4*	2605	2705
84-110	See Page 48												

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

FIGURE NO. 881H - TYPE C CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6 1/2" and over for 12" turnbuckle up to and including 1 1/2" rod size.

DIMENSION "L"

Hanger Size	Rod Size						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"						
	1/2	5/8	3/4	1	1 1/4	1 1/2	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.	
1-9	6 1/4	-	-	-	-	-	-	-	-	-	-	-	
10-18	13	13 3/4	14 1/2	-	-	-	1 1/2-3 1/2	6	4-8	8 1/2	8 1/2-13 1/2	11 3/4	
19-34	14 1/4	15	15 3/4	17 3/8	18 1/4	-	2-5	8 1/2	5 1/2-10	10 1/2	10 1/2-13 1/2	13 3/8	
35-49	16	16 3/4	17 1/2	19 1/8	20	21 1/8	2 1/2-6	8 7/8	6 1/2-14	13 1/2	-	-	
50-63	-	-	20 1/4	21 7/8	22 3/4	23 7/8	3-11	10 5/8	11 1/2-16	15 5/8	-	-	
64-74	-	-	-	-	24	25 1/4	4-16	16 1/8	-	-	-	-	
75-83	-	-	-	-	-	25 1/4	4-16	18 7/8	-	-	-	-	
84-110	See Page 48												

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series..

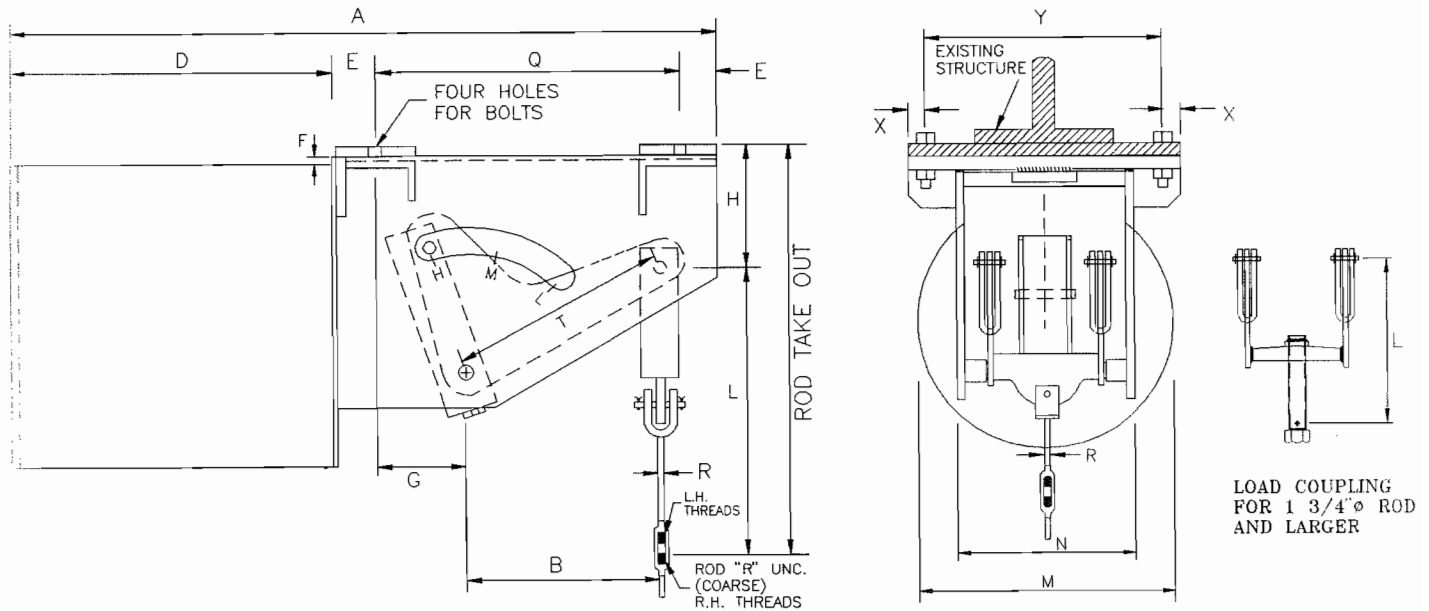
DIMENSION "H"

Hgr. Size	Total Travel																
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	6	5 3/4	5 1/2	5 1/4	4 3/4	4 1/4	3 3/4	3 1/4	2 3/4	-	-	-	-	-	-	-	-
10-18	6 3/4	6 1/2	6 1/4	6	5 1/2	5	4 1/2	4	3 1/2	-	-	-	-	-	-	-	-
19-34	-	10 1/2	10 1/4	10	9 1/2	9	8 1/2	8	7 1/2	7	6 1/2	-	-	-	-	-	-
35-49	-	-	13	12 3/4	12 1/4	11 3/4	11 1/4	10 3/4	10 1/4	9 3/4	9 1/4	8 3/4	8 1/4	7 3/4	7 1/4	-	-
50-63	-	-	-	18	17 1/2	17	16 1/2	16	15 1/2	15	14 1/2	14	13 1/2	13	12 1/2	12	11 1/2
64-74	-	-	-	-	24 1/4	23 3/4	23 1/4	22 3/4	22 1/4	21 3/4	21 1/4	20 3/4	20 1/4	19 3/4	19 1/4	18 3/4	18 1/4
75-83	-	-	-	-	27 3/4	27 1/4	26 3/4	26 1/4	25 3/4	25 1/4	24 3/4	24 1/4	23 3/4	23 1/4	22 3/4	22 1/4	21 3/4
84-110	See Page 48																

DIMENSION "B" AVERAGE INCHES

B	Total Travel																
	1 1/2	2	2 1/2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1 3/8	1 7/8	2 1/4	2 3/4	3 5/8	4 5/8	5 1/2	6 1/2	7 3/8	8 1/4	9 1/4	10 1/8	11	12	12 7/8	13 7/8	14 3/4

FIGURE NO. 881H - TYPE D CONSTANT SUPPORTS



PAINTED & GALVANIZED UNITS

GALVANIZED UNITS ORDER C881H

SEE PAGE 47 FOR ROD CHART

The 881-H Type D constant is a horizontal unit for attaching to structural members by directly bolting under steel.

Notes: T=Total Travel

Units with total travels of 6" and less are furnished with 6" turnbuckles. Turnbuckles are furnished up to 1 1/2" rod size. Units with total travels of 6 1/2" and larger are furnished with 12" turnbuckles. Units with 1 3/4" rod size and larger are furnished with load couplings.

Rod Take Out = H + L

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Size	Total Travel	A	Q	D	E	F	G	M	N	X	Y	Bracket Hole Dia	Standard Rod R	Apprx. Wgt.	
														Net	Shipping
1-9	4" or less 4 1/2" or more	14 18	6 10	6	1	7/8	2	6 1/4	4 1/4	3/4	5 5/8	9/16	1/2	25	27
10-18	5" or less 5 1/2" or more	20 3/8 23 3/8	8 11	10 3/8	1	5/16	2 9/16	8 5/8	5 7/8	7/8	8	3/4	1/2 - 3/4	70	75
19-34	5" or less 5 1/2" or more	28 1/16 32 3/16	9 1/2 13 5/8	15 9/16	1 1/2	9/16	3 7/8	12 1/2	8 3/8	1 1/8	10 3/4	3/4	1/2 - 1 1/4	200	208
35-49	6" or less 6 1/2" or more	33 3/8 41 3/8	10 1/2 18 1/2	18 7/8	2	3/4	4 3/4	13 3/4	9 15/16	1 3/8	12 5/8	7/8	1/2 - 1 3/4	368	380
50-63	8" or less 8 1/2" or more	48 1/8 56 1/8	15 3/8 23 3/8	28 3/4	2	1 5/16	7 11/16	17 7/8	11 1/4	1 5/8	14 5/8	1 3/8	3/4 - 2 1/4	758	818
64-74	10 1/2" or less 11" or more	60 3/4 66 1/4	15 3/4 21 1/4	39	3	3 1/4	5 1/4	22 1/4	11	2	15	1 5/8	1 1/4 - 2 3/4	1773	1873
75-83	10 1/2" or less 11" or more	60 3/4 66 1/4	15 3/4 21 1/4	39	3	3 1/2	5	27 1/2	11	2	15	1 5/8	1 1/2 - 3 1/4*	2605	2705
84-110	Not Available														

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

ANGLE SIZE

1-9	10-18	19-34	35-49	50-63	64-74	75-83
2 x 2 x 1/4	2 x 2 x 1/4	2 x 3 x 1/4	3 x 4 x 3/8	4 x 4 x 3/8	4 x 6 x 1/2	4 x 6 x 1/2

FIGURE NO. 881H - TYPE D CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to and including 1½" rod size.

DIMENSION "L"

Hanger Size	Rod Size						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	½	⅝	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	6¼	-	-	-	-	-	-	-	-	-	-	-
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾
19-34	14¼	15	15¾	17¾	18¼	-	2-5	8½	5½-10	10½	10½-13½	13¾
35-49	16	16¾	17½	19½	20	21½	2½-6	8¾	6½-14	13½	-	-
50-63	-	-	20¼	21¾	22¾	23¾	3-11	10⅝	11½-16	15⅝	-	-
64-74	-	-	-	-	24	25¼	4-16	16⅞	-	-	-	-
75-83	-	-	-	-	-	25¼	4-16	18⅞	-	-	-	-
84-110	Not Available											

*3¼" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

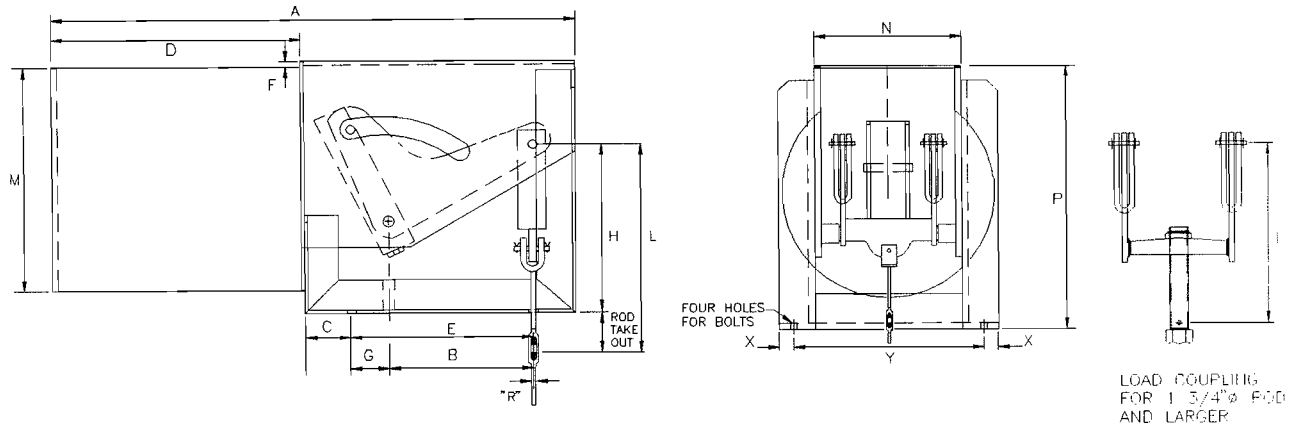
DIMENSION "H"

Hgr. Size	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	5	4¾	4½	4¼	3¾	3¼	2¾	2¼	1¾	-	-	-	-	-	-	-	-
10-18	5½	5¼	5	4¾	4¼	3¾	3¼	2¾	2¼	-	-	-	-	-	-	-	-
19-34	-	8¾	8½	8¼	7¾	7¼	6¾	6¼	5¾	5¼	4¾	-	-	-	-	-	-
35-49	-	-	10¼	10	9½	9	8½	8	7½	7	6½	6	5½	5	4½	-	-
50-63	-	-	-	14½	14	13½	13	12½	12	11½	11	10½	10	9½	9	8½	8
64-74	-	-	-	-	20¼	19¾	19¼	18¾	18¼	17¾	17¼	16¾	16¼	15¾	15¼	14¾	14¼
75-83	-	-	-	-	23¼	22¾	21¾	20¾	20¼	19¾	19¼	18¾	18¼	17¾	17¼	16¾	16¼
84-110	Not Available																

DIMENSION "B" AVERAGE INCHES

B	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1¾	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7¾	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

FIGURE NO. 881H - TYPE E CONSTANT SUPPORTS



PAINTED & GALVANIZED UNITS

GALVANIZED UNITS ORDER C881H

SEE PAGE 47 FOR ROD CHART

The 881-H Type E constant is a horizontal unit for bolting the base of the unit to the top of the structural members. The angle bracket on the side of the unit has four bolt holes for securing the unit to the structure.

Notes: T=Total Travel

Units with total travels of 6" and less are furnished with 6" turnbuckles. Turnbuckles are furnished up to 1 1/2" rod size. Units with total travels of 6 1/2" and larger are furnished with 12" turnbuckles. Units with 1 3/4" rod size and larger are furnished with load couplings.

Rod Take Out = L - H

Weights are in Pounds and Dimensions are in Inches

Size	Total Travel	A	C	D	E	F	G	M	N	P	X	Y	Standard Rod R	Apprx. Wgt.	
														Net	Shipping
1-9	4" or less 4 1/2" or more	14 18	1	6	6 10	7/8	2	6 1/4	4 1/4	8 1/16	5/8	5 15/16	1/2	25	27
10-18	5" or less 5 1/2" or more	20 3/8 23 3/8	1 1/4	10 3/8	7 1/2 10 1/2	5/16	2 9/16	8 5/8	5 7/8	9 7/8	5/8	8 1/16	1/2 - 3/4	70	75
19-34	5" or less 5 1/2" or more	28 1/16 32 3/16	1 1/4	15 9/16	10 14 1/8	9/16	3 7/8	12 1/2	8 3/8	14 1/8	5/8	10 3/16	1/2 - 1 1/4	200	208
35-49	6" or less 6 1/2" or more	33 3/8 41 3/8	1 7/16	18 7/8	11 5/8 19 5/8	3/4	4 3/4	13 3/4	9 15/16	15 1/2	13/16	12 3/8	1/2 - 1 3/4	368	380
50-63	8" or less 8 1/2" or more	48 1/8 56 1/8	2	28 3/4	15 3/8 23 3/8	15/16	7 1/16	17 7/8	11 1/4	19 3/4	1 5/16	14 1 1/16	3/4 - 2 1/4	758	818
64-74	10 1/2" or less 11" or more	60 3/4 66 1/4	2 1/8	39	17 1/2 23	3 1/4	5 1/4	22 1/4	11	26 7/8	1 9/16	14 15/16	1 1/4 - 2 3/4	1773	1873
75-83	10 1/2" or less 11" or more	60 3/4 66 1/4	2 1/8	39	17 1/2 23	3 1/2	5	27 1/2	11	31 7/8	1 9/16	14 15/16	1 1/2 - 3 1/4*	2605	2705
84-110	See Page 48														

*3 1/4" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSIONS

Size	1-9	10-18	19-34	35-49	50-63	64-74	75-83
Bolt Hole Dia.	9/16	3/4	3/4	7/8	1 3/8	1 5/8	1 5/8
Angle Size	1 1/2 x 1 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4	1 1/2 x 1 1/2 x 1/4	2 x 2 x 3/8	3 x 3 x 3/8	3 1/2 x 3 1/2 x 3/8	3 1/2 x 3 1/2 x 3/8

FIGURE NO. 881H - TYPE E CONSTANT SUPPORTS

To dimension "L" add 3" for total travels 6½" and over for 12" turnbuckle up to and including 1½" rod size.

DIMENSION "L"

Hanger Size	Rod Size						Load Coupling Optional 1/2"-1 1/2" Std. 1 3/4"-3 1/4"					
	½	⅝	¾	1	1¼	1½	Total Travel	"L" Dim.	Total Travel	"L" Dim.	Total Travel	"L" Dim.
1-9	6¼	-	-	-	-	-	-	-	-	-	-	-
10-18	13	13¾	14½	-	-	-	1½-3½	6	4-8	8½	8½-13½	11¾
19-34	14¼	15	15¾	17¾	18¼	-	2-5	8½	5½-10	10½	10½-13½	13¾
35-49	16	16¾	17½	19½	20	21½	2½-6	8¾	6½-14	13½	-	-
50-63	-	-	20¼	21¾	22¾	23¾	3-11	10⅝	11½-16	15⅝	-	-
64-74	-	-	-	-	24	25¼	4-16	16⅞	-	-	-	-
75-83	-	-	-	-	-	25¼	4-16	18⅞	-	-	-	-
84-110	See Page 48											

*3¼" is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

DIMENSION "H"

Hgr. Size	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-9	3½	3¾	4	4¼	4¾	5¼	5¾	6¼	6¾	-	-	-	-	-	-	-	-
10-18	4½	4¾	5	5¼	5¾	6¼	6¾	7¼	7¾	-	-	-	-	-	-	-	-
19-34	-	5¾	6	6¼	6¾	7¼	7¾	8¼	8¾	9¼	9¾	-	-	-	-	-	-
35-49	-	-	5½	5¾	6¼	6¾	7¼	7¾	8¼	8¾	9¼	9¾	10¼	10¾	11¼	-	-
50-63	-	-	-	5¾	6¼	6¾	7¼	7¾	8¼	8¾	9¼	9¾	10¼	10¾	11¼	11¾	12¼
64-74	-	-	-	-	7	7½	8	8½	9	9½	10	10½	11	11½	12	12½	13
75-83	-	-	-	-	9¼	9¾	10¼	10¾	11¼	11¾	12¼	12¾	13¼	13¾	14¼	14¾	15¼
84-110	See Page 48																

DIMENSION "B" AVERAGE INCHES

B	Total Travel																
	1½	2	2½	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B	1⅜	1⅞	2¼	2¾	3⅝	4⅝	5½	6½	7⅝	8¼	9¼	10⅞	11	12	12⅞	13⅞	14¾

FIGURE NO. 881H - TYPE U UPTHrust CONSTANT SUPPORT

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches																
	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½
1	105 145	90 130	75 100	60 85	55 70	45 65	40 55	35 50	35 45	30 40							
2	215	175	140	115	100	85	80	70	65	60							
3	280	235	190	160	135	120	105	95	85	80							
4	395	325	260	215	185	165	145	130	120	110							
5	540	445	360	295	255	225	200	180	160	150							
6	735	600	485	405	345	305	270	245	220	205							
7	925	755	605	505	435	380	335	305	275	255							
8		905	725	605	520	455	405	365	330	305							
9		1090	875	725	625	545	485	435	395	365							
10		1310	1045	875	750	655	585	525	475	440							
11		1465	1175	980	840	735	650	585	535	490							
12		1620	1295	1080	925	810	720	650	590	540							
13		1810	1450	1210	1035	905	805	725	660	605							
14		2000	1605	1335	1145	1005	890	805	730	670							
15		2240	1790	1495	1280	1120	995	900	815	750							
16		2475	1980	1655	1415	1240	1100	990	900	825							
17		2770	2215	1850	1585	1385	1230	1110	1010	925							
18		3060	2445	2045	1750	1530	1365	1225	1115	1020							
19		3400	2720	2265	1940	1670	1510	1360	1240	1135							
20		3735	2990	2490	2130	1870	1660	1495	1360	1245							
21			3295	2745	2350	2060	1830	1650	1500	1375	1270	1180	1100	1030			
22			3600	3000	2575	2250	2000	1800	1640	1500	1385	1285	1200	1125			
23			6930	3300	2830	2475	2200	1980	1800	1650	1525	1415	1320	1240			
24			4320	3600	3085	2700	2400	2160	1965	1800	1665	1545	1440	1350			
25			4755	3960	3395	2970	2640	2375	2160	1980	1830	1700	1585	1485			
26			5185	4320	3710	3240	2880	2595	2355	2160	1995	1855	1730	1620			
27			5710	4755	4075	3565	3170	2855	2595	2380	2195	2040	1905	1785			
28			6230	5190	4445	3890	3460	3115	2830	2595	2395	2225	2075	1945			
29			6845	5705	4890	4280	3805	3425	3110	2855	2635	2445	2285	2140			
30			7645	6380	5465	4780	4250	3825	3475	3190	2945	2735	2555	2395	2250	2125	2020
31				7215	6180	5405	4810	4330	3935	3600	3330	3090	2885	2705	2545	2405	2285
32				7895	6760	5915	5265	4740	4305	3945	3640	3380	3150	2960	2780	2630	2500
33				8770	7510	6575	5845	5260	4780	4380	4045	3750	3500	3285	3095	2920	2775
34				9640	8265	7225	6425	5775	5250	4815	4450	4130	3845	3610	3405	3210	3050
35				10700	9160	8020	7130	6415	5830	5345	4940	4585	4220	4010	3775	3565	3385
36				11760	10060	8820	7840	7055	6415	5880	5430	5040	4600	4410	4150	3920	3720
37				13055	11180	9790	8700	7835	7120	6530	6030	5595	5170	4895	4605	4350	4130
38				14350	12305	10760	9565	8610	7830	7175	6625	6150	5745	5380	5060	4785	4545
39				15985	13700	11985	10650	9585	8725	7995	7375	6850	6390	5990	5640	5330	5060
40				17615	15095	13205	11740	10565	9610	8810	8125	7545	7040	6605	6215	5870	5575
41				19310	16545	14480	12875	11580	10530	9655	8910	8275	7720	7240	6815	6435	6115
42					18000	15750	14005	12600	11455	10500	9690	9000	8400	7875	7415	7005	6650
43					19140	16740	14880	13390	12170	11160	10300	9565	8925	8370	7875	7445	7070
44					20280	17725	15750	14175	12885	11825	10910	10135	9450	8860	8335	7885	7485
45					21700	19050	16925	15235	13850	12705	11725	10890	10160	9525	8960	8470	8045
46					23250	20370	18100	16295	14815	13585	12535	11640	10870	10185	9585	9050	8600
47						22325	19845	17860	16240	14890	13740	12755	11910	11160	10510	9925	9520
48						24290	21590	19425	17660	16190	14945	13870	12960	12140	11435	10795	10260
49							23290	20960	19055	17465	16125	14970	13980	13100	12330	11645	11065
50							24990	22490	20450	18740	17300	16065	15005	14060	13230	12495	11870
51							27195	24475	22250	20395	18830	17490	16320	15300	14390	13600	12935

*Note: Total travel equals actual travel plus 1 inch or 20% (whichever is greater) rounded up to the nearest 1/2 inch as applicable.

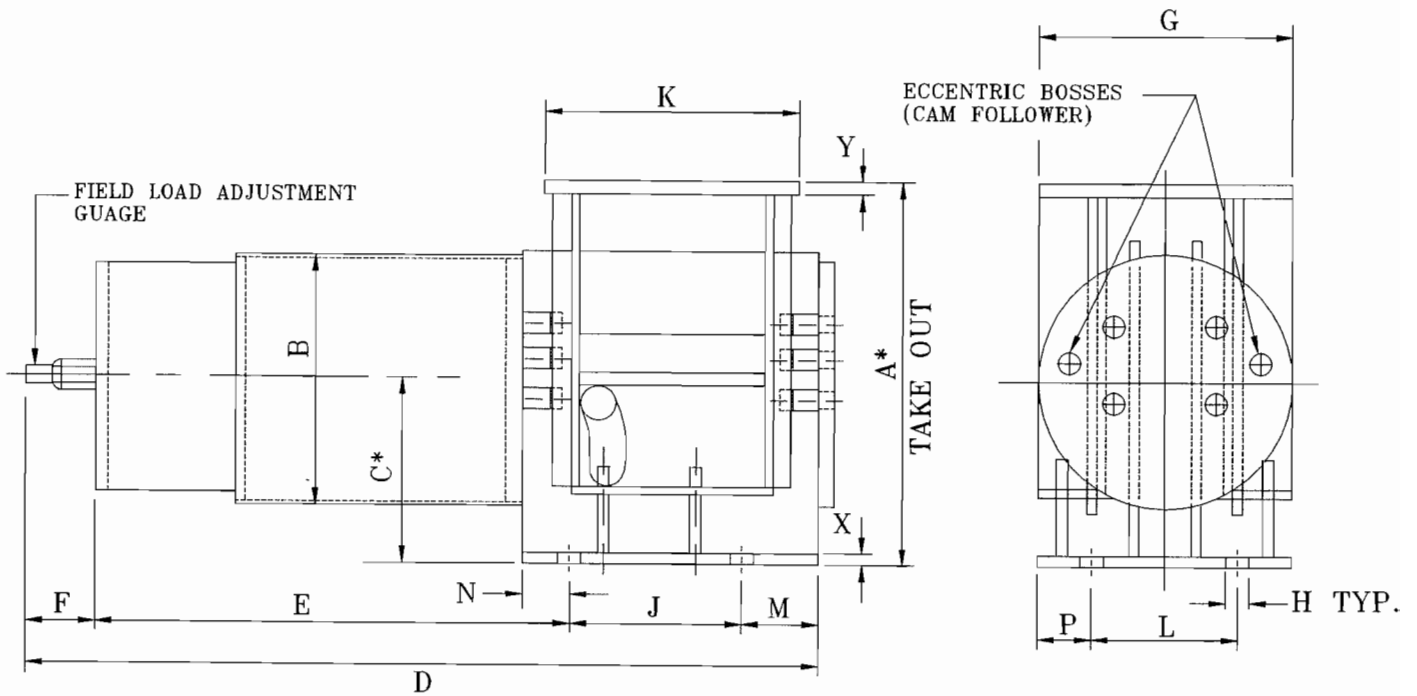
FIGURE NO. 881H - TYPE U UPTHrust CONSTANT SUPPORT

Load Travel Table

Hgr. Size No.	Load in Pounds for Total Travel* in Inches															
	10	10½	11	11½	12	12½	13	13½	14	14½	15	15½	16	16½	17	17½
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
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29																
30																
31	2160															
32	2365															
33	2625															
34	2890															
35	3205															
36	3525															
37	3915															
38	4305															
39	4795															
40	5280															
41	5790															
42	6300	6015	5725	5490	5250											
43	6695	6390	6085	5835	5580											
44	7090	6765	6445	6175	5905											
45	7620	7270	6925	6635	6350											
46	8150	7775	7410	7095	6790											
47	8935	8525	8120	7780	7440											
48	9720	9275	8830	8460	8095											
49	10485	10005	9530	9130	8735											
50	11245	10735	10225	9800	9370											
51	12240	11680	11125	10660	10195											

*Note: Total travel equals actual travel plus 1 inch or 20% (whichever is greater), rounded up to the nearest 1/2 inch as applicable.

FIGURE NO. 881H TYPE U UPTHRUST CONSTANT SUPPORT



The Upthrust Constant is designed for use on piping that must be supported from below. It may be attached to the supporting structure by bolting or welding. The pipe attachment rests on top of the platform on the unit and forms a non-integral flat sliding type connection in conjunction with a friction reducing medium (see note 1). The vertical alignment of the platform is assured by the use of low friction cam followers. The best operation of the unit is obtained when the load is centered on the platform. Offsetting the thermal movement half on either side of the platform centerline will assure the best operation. The upthrust unit is available for loads ranging from 30 through 27195 pounds and travels from 1½" through 12". See the accompanying tables for complete selection information.

DIMENSIONS

Size	Total Travel	B	D Max.	E	F	G	H	J	K	L	M	N	P	Q	X	Y	Net	Shipping
1-7	½-6	5 ¹⁵ / ₁₆	24 ¹⁵ / ₁₆	12¼	3 ¹¹ / ₁₆	8	9 ¹ / ₁₆	6	9	6 ³ / ₈	2 ³ / ₈	1 ³ / ₈	1 ¹³ / ₁₆	3 ³ / ₈	¼	½	50	75
8-20	2-6	9	29	15½	4¼	10	9 ¹ / ₁₆	6	10	8	3¼	1 ⁵ / ₈	1	7 ¹ / ₁₆	½	¾	195	240
21-26	2½-8	12 ³ / ₁₆	33 ³ / ₈	16½	4 ⁵ / ₈	13	1 ¹ / ₁₆	8	12½	9 ³ / ₄	4¼	1 ¹³ / ₁₆	1½	¾	5 ⁵ / ₈	¾	335	375
27-30	2½-8	4 ¹ / ₁₆	35 ¹ / ₁₆	17½	5 ¹ / ₁₆	13	1 ³ / ₁₆	8	13	10½	4½	2 ¹ / ₁₆	1½	¾	¾	¾	405	435
31-37	3-10	14 ¹ / ₈	45 ³ / ₈	24 ⁵ / ₈	6 ¹ / ₈	15	1 ³ / ₁₆	10	14¾	12 ¹ / ₈	4 ⁵ / ₈	2½	1 ¹ / ₈	1 ³ / ₁₆	¾		640	775
38-41	3-10	14 ¹⁵ / ₁₆	50½	29	6½	15	1 ³ / ₁₆	10	16	12 ³ / ₈	5	3	2	1	1	1	850	930
42-46	3½-12	18¼	53 ⁷ / ₈	30 ¹ / ₁₆	7	17½	1 ¹ / ₈	15	18	13½	1 ¹³ / ₁₆	3 ³ / ₁₆	2¼	1	1¼	1¼	950	1170
47-48	4-12	19 ⁷ / ₁₆	59¼	32 ¹³ / ₁₆	7 ³ / ₈	19 ⁷ / ₈	1 ¹ / ₈	15½	20	16½	3 ⁹ / ₁₆	3 ⁷ / ₁₆	2¼	1¼	1¼	1¼	1290	1510
49-51	4½-12	20 ¹ / ₁₆	62 ¹ / ₈	34 ⁷ / ₈	7 ⁷ / ₈	20¼	1 ¹ / ₈	16	20½	18½	3 ³ / ₈	3 ⁵ / ₈	2¼	1¼	1¼	1¼	1500	1780

FIGURE NO. 881H TYPE U UPTHRUST CONSTANT SUPPORT

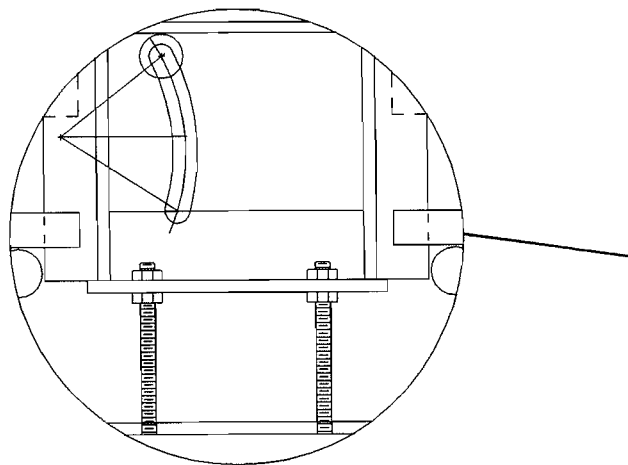
DIMENSION "A"

Total Travel																						
Size	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12
1-7	10¼	11¼	12¼	13¼	14¼	15¼	16¼	17¼	18¼	19¼												
8-20		15¾	16¾	17¾	18¾	19¾	20¾	21¾	22¾	23¾												
21-26			19	20	21	22	23	24	25	26	27	28	29	30								
27-30			21	22	23	24	25	26	27	28	29	30	31	32								
31-37				22¼	23¼	24¼	25¼	26¼	27¼	28¼	29¼	30¼	31¼	32¼	33¼	34¼	35¼	36¼				
38-41				23¾	24¾	25¾	26¾	27¾	28¾	29¾	30¾	31¾	32¾	33¾	34¾	35¾	36¾	37¾				
42-46					27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
47-48						28¾	29¾	30¾	31¾	32¾	33¾	34¾	35¾	36¾	37¾	38¾	39¾	40¾	41¾	42¾	43¾	44¾
49-51							30⅞	31⅞	32⅞	33⅞	34⅞	35⅞	36⅞	37⅞	38⅞	39⅞	40⅞	41⅞	42⅞	43⅞	44⅞	45⅞
Short Travel See Note 1											Standard Travel See Note 1											

DIMENSION "C"

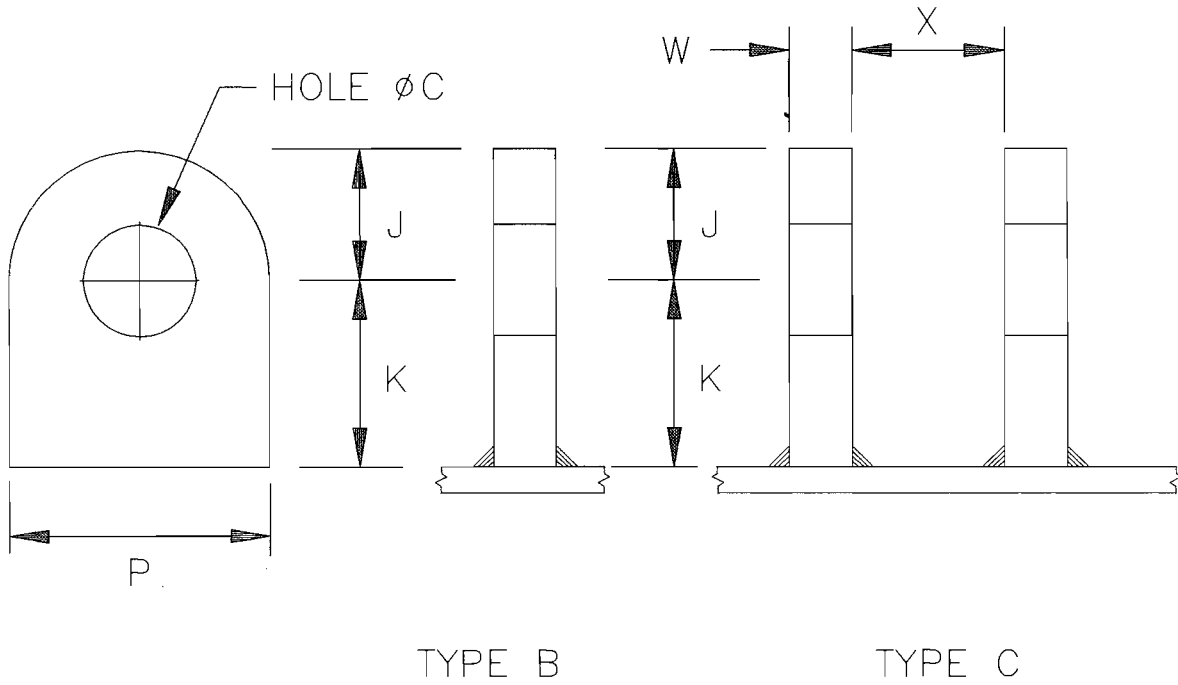
Total Travel																						
Size	1½	2	2½	3	3½	4	4½	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½	11	11½	12
1-7	5	5½	6	6½	7	7½	8	8½	9	9½												
8-20		7⅝	8⅝	8⅝	9⅝	9⅝	10⅝	10⅝	11⅝	11⅝												
21-26			9¾	9¾	10¾	10¾	11¾	11¾	12¾	12¾	13¾	13¾	14¾	14¾								
27-30			10½	11	11½	12	12½	13	13½	14	14½	15	15½	16								
31-37				11	11½	12	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18				
38-41				11⅞	12⅞	12⅞	13⅞	13⅞	14⅞	14⅞	15⅞	15⅞	16⅞	16⅞	17⅞	17⅞	18⅞	18⅞				
42-46					13½	14	14½	15	15½	16	16½	17	17½	18	18½	19	19½	20	20½	21	21½	22
47-48						14½	15	15½	16	16½	17	17½	18	18½	19	19½	20	20½	21	21½	22	22½
49-51							15⅞	16⅞	16⅞	17⅞	17⅞	18⅞	18⅞	19⅞	19⅞	20⅞	20⅞	21⅞	21⅞	22⅞	22⅞	23⅞
Short Travel See Note 1											Standard Travel See Note 1											

General Notes:



1. The Upthrust Constant is to be mounted on a firm structural base below the piping attachment point. The load is supported on the top platform plate without any mechanical connection. The user must provide a low friction means to accommodate the expected lateral motion such as PTFE slides or lubricant impregnated bearing plates. The Short Travel units will withstand horizontal forces up to 5% of their rated load capacity. The Standard Travel units will withstand horizontal forces up to 25% of their rated load. (Note: PTFE and similar friction reducing elements provide a friction factor of approx. 0.10 or 10% compared to a steel on steel factor of 0.3 to 0.6 (30 to 60%) depending on the surface finish).
2. The Upthrust Constant are shipped with the load platform fixed in the proper position for installation. This is accomplished by the use of temporary locking studs with lock nuts as shown in the detail view. These studs are also intended to withstand the additional load of hydrostatic testing. When the testing is completed THE TOP NUT MUST BE REMOVED AND THE BOTTOM NUT MUST BE TURNED DOWN UNTIL IT CONTACTS THE BASE PLATE, ON EACH OF THE FOUR STUDS. This will prevent any interference with the operation of the unit.
3. Four mounting holes "H" dia. have been provided for bolting to the supporting structure.

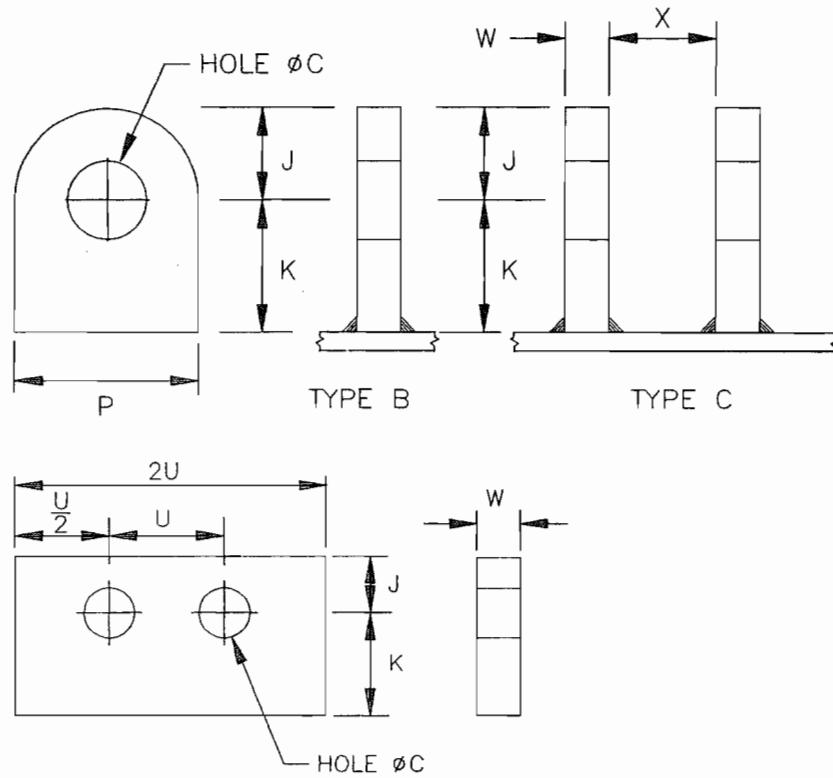
**FIGURE NO. 880V & 881H TYPE B & C LUG AND ROD CHART
 SIZE 84 - 110 CONSTANT SUPPORTS**



ALL DIMENSIONS ARE IN INCHES

Load Lb	14376 18300	18301 24700	24701 31000	31001 39000	39001 48000	48001 58000	58001 69000	69001 87500
Rod Dia. "R"	2	2¼	2½	2¾	3	3¼	3½	3¾
C Hole Dia.	2¾	2⅝	2⅞	3⅛	3¾	3⅝	3⅞	4⅛
J	3	3	4	4	4	4½	4½	4½
K	6	6	6	6	6	6	6	6
P	6	6	8	8	8	9	9	9
W	¾	¾	1	1	1	1	1½	1¾
X	2⅞	3⅛	3¾	3⅝	3¾	4⅛	4¾	4⅝

FIGURE NO. 881H TYPE B & C LUG AND ROD CHART CONSTANT SUPPORTS



SINGLE SUSPENSION

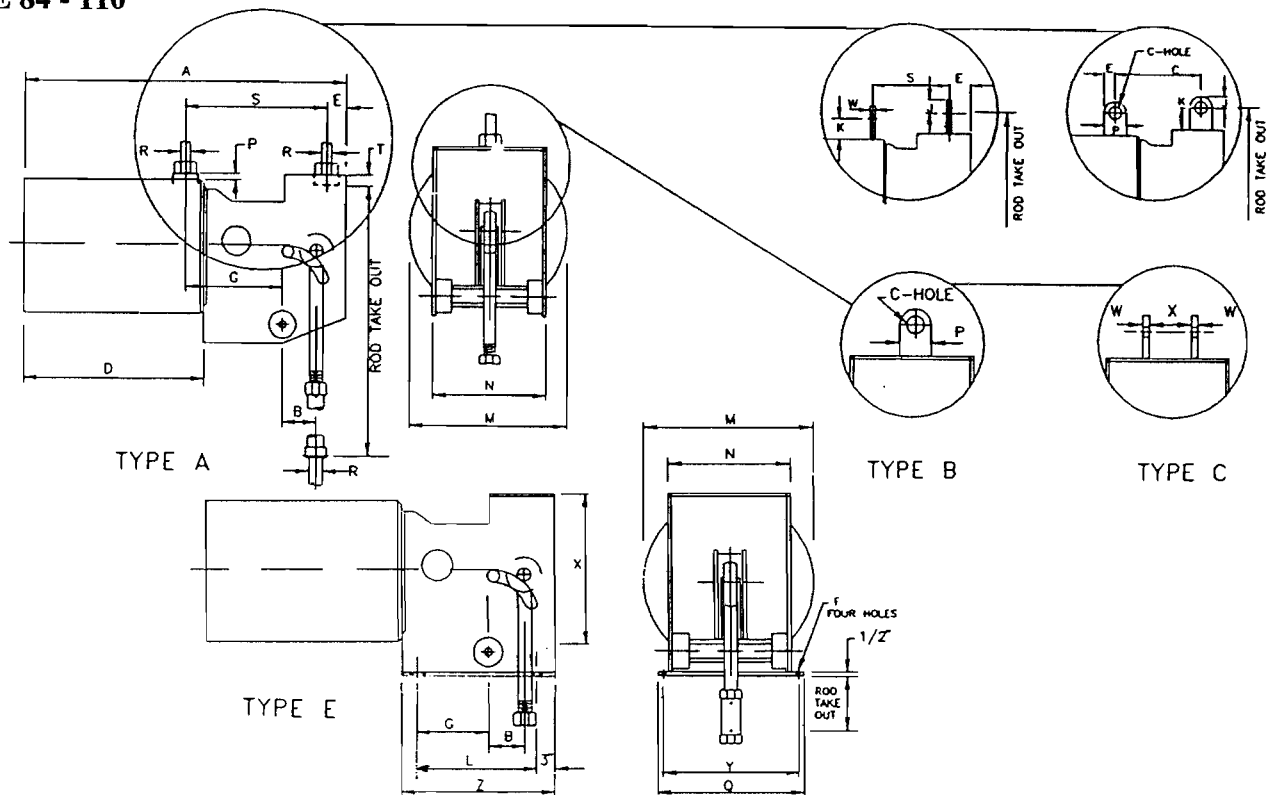
ALL DIMENSIONS ARE IN INCHES

Load Lb	0 800	801 1500	1501 2540	2541 4000	4001 6100	6101 9400	9401 13400	13401 18300	18301 24700	24701 31000	31001 39000	39001 48000	48001 58000
Rod "R" Dia.	1/2	5/8	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4*
C Hole Dia.	1 1/16	1 3/16	1 5/16	1 1/4	1 1/2	1 3/4	2	2 3/8	2 5/8	2 7/8	3 1/8	3 3/8	3 5/8
J	1 1/4	1 1/4	1 1/4	1 1/2	1 3/4	2 1/2	2 1/2	3	3	4	4	4	4 1/2
P	2 1/2	2 1/2	2 1/2	3	3 1/2	5	5	6	6	8	8	8	9
U	2 1/2	2 1/2	2 1/2	3	4	5	5	6	6	-	-	-	-
W	3/8	3/8	3/8	1/2	5/8	3/4	3/4	3/4	3/4	1	1	1	1
X	7/8	1	1 1/4	1 5/8	2	2 3/8	2 5/8	2 7/8	3 1/8	3 3/8	3 5/8	3 7/8	4 1/8

*3 1/4 is furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

Hanger Size	1-9	10-18	19-34	35-49	50-63	64-74	75-83
K	1 1/2	1 1/2	2	3	4	4 1/2	5

**FIGURE NO. 881H HORIZONTAL DESIGN TYPE A, B & C CONSTANT SUPPORTS
SIZE 84 - 110**



The 881-H Type A, B and C sizes 84 to 110, for large loads and long travels, provide for basically the same methods of upper attachment as sizes 1 to 83 shown on pages 32-36. Type E is designed for bolting to the top of structural steel, see page 40 for sizes 1 to 83.

ALL DIMENSIONS ARE IN INCHES

Hgr. Size	Total Travel	A	S		D	E		F	G		H	L	M	N	Q	T	X	Y	Z
			Type A,B	Type C		Type A,B	Type C		Type A,B,C	Type E									
84-94	9½" or less 10" or more	76¾	28	27½	49¾	4	4½	1⅛	14	6	6	21	24	10½	16	3	34	13	27
95-110	14" or less 14½" or more	100	49	48½	64	4	4½	1⅜	28¾	8¾	6	30	24	11½	17	3½	37	14½	36

WEIGHTS ARE IN POUNDS AND DIMENSIONS ARE IN INCHES

Hgr. Size	Total Travel	Factor**			Min. Thd. Lgth.	J-Rod		Approx. Weight	
		Type A	Type B,C	Type E		Rod Dia.		Net	Shipping
						Min.	Max.		
84-94	9½" or less 10" or more	52⅝	61⅝	21⅝	10 13	2	3¾*	3255	3375
		62⅜	71⅜	31⅝					
95-110	14" or less 14½" or more	51⅞	60⅝	17⅝	12 15	2½	3¾*	5800	5950
		60⅞	69⅝	26⅝					

*3¼ and larger are furnished with 8UN series threads, 3" and smaller are National Coarse Thread Series.

** Rod Take-Out = factor minus ¾ total travel.

DIMENSIONS "B"

B	Total Travel																		
	5	5½	6	6½	7	7½	8	8½	9	9½	10	10½							
B	4⅜	4⅞	5	5⅜	5⅓	6¼	6⅝	7⅞	7½	7⅞	8⅞	8¾							
B	Total Travel																		
	11	11½	12	12½	13	13½	14	14½	15	15½	16	16½	17	17½	18	18½	19	19½	20
B	9⅞	9⅞	10	10⅜	10⅓	11⅞	11⅞	12⅞	12⅞	13⅞	13⅞	14⅞	14⅞	14⅞	15⅞	15⅞	16⅞	16⅞	16⅞

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