

HEAD BLOCKS - Limits of Use

12" Single Purchase Underhung with Beam Angles

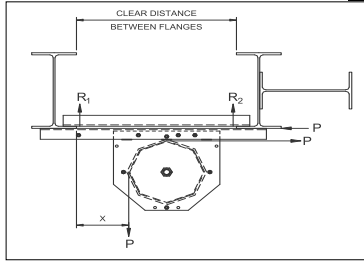
THESE TABLES APPLY TO JRC PART NUMBERS:

1CS-101259R REV 6
1XS-61259R REV 6
1XS-81259R REV 7

Headblock Load Rating Table Instructions

- NOTE: There are individual tables for each size and orientation of head block
- Review the LIMITS OF USE section shown on the right hand side of this document. If your project does not meet the LIMITS OF USE, please contact J R Clancy for further information.
 - Review the project for the exact requirements of your specific head block. You will need to know the following information prior to using the head block load rating tables:
 - Orientation of block (upright or underhung) and/or underhung, the attachment method.
 - Size of the block (sheave diameter at 8", 12", or 16").
 - The clear distance between the supporting head steel flanges (NOT the beam centerline distance).
 - The distance from the onstage side of the offstage beam flange to the offstage handline.
 - Once you know the above information find the tables that match the size and orientation of the headblock you need.
 - Once you have located the tables for your particular block, on TABLE 1, go to the leftmost column on the table labeled "Clear Distance Between Flanges" or "Center - Center Weld Distance". Read down until you find the distance specific to your project.
 - Next find the "Distance Between Offstage Beam Flange and Handline (Dimension X)" across the top row of the spreadsheet.
 - Where your selected Row and Column intersect will be the Gross Load Capacity (in lbs) of your headblock.
 - Next find the cable diameter and sheave type in TABLE 2 below. Calculate the Tread Pressure Limited Capacity by multiplying the maximum individual line load x the number of lift lines.
 - Your final maximum RWL for your head block will be the lesser of:
 - the Gross RWL from the Table, OR
 - the Tread Pressure Limited Capacity.

NOTE: The above values are based on block capacity only and do not reflect the capacity of the cable you use. Consult your wire rope manufacturer for the RWL for your particular cable.



Head Blocks - LIMITS OF USE

NOTE: RWL (Recommended Working Load) is a function of mounting conditions and is only valid when the following criteria are met.

- All lift lines wrap 90° around the sheave, all hand lines wrap 180° around the sheave. All headblocks mount on two beams, with the shaft between the beam centerlines. All cable fleet angles are less than 1.5°. For Underhung Headblocks, they shall be attached to structural steel in one of the following three methods:
- beam clip angles, min. two 2" x 1 1/4" x 1/4" angles, back to back bolted with 1/2" gr 5 bolts.
 - formed clips with two 1/2" gr 5 bolts, from one of the following JRC part #'s:
 - 070-38850, 070-38875, 070-388100
 - 070-38850, 070-38875, 070-388100
 - welded directly to the beam, min. four 1/4" fillet welds at 1.5" in length ea.
- For Upright Headblocks they shall be attached to structural steel by either b), or c) abc. The onstage connection to structure must have the bolt bear directly against the mounting steel in shear.
- CONTACT J R CLANCY FOR OTHER MOUNTING CONDITIONS.

TABLE 1 - HEAD BLOCK GROSS LOAD CAPACITY (in lbs.) - 12" Single Purchase Underhung Head Block with Beam Angles

Clear Distance Between Flanges	Distance Between Offstage Beam Flange and Offstage Handline (Dimension "X")																			
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11		
10	2150	2278	2422	2585	2772	2989	3241	3401	3401	3401	3401	3401	2990							
11	2050	2389	2531	2691	2872	3080	3321	3401	3401	3401	3401	3401	3401	2917	2255					
12	1664	2488	2628	2784	2960	3160	3388	3401	3401	3401	3401	3401	3401	2858	2181					
13	1439	2048	2714	2867	3037	3229	3401	3401	3401	3401	3401	3401	3401	2858	2181	1872				
14	1291	1758	2544	2941	3106	3290	3401	3401	3401	3401	3401	3401	3382	2810	2122	1798	1636			
15	1187	1568	2171	3007	3167	3344	3401	3401	3401	3401	3401	3401	3358	2770	2074	1739	1562	1477		
16	1109	1434	1927	2726	3222	3393	3401	3401	3401	3401	3401	3401	3337	2736	2034	1691	1503	1403	1362	
17	1049	1334	1754	2408	3271	3401	3401	3401	3401	3401	3401	3401	3320	2707	2001	1651	1456	1344	1288	1276
18	1001	1257	1625	2183	3089	3401	3401	3401	3401	3401	3401	3401	3304	2683	1972	1617	1415	1296	1229	1201
19	962	1195	1526	2016	2792	3401	3401	3401	3401	3401	3401	3401	3290	2661	1947	1589	1382	1256	1181	1142
20	929	1145	1446	1887	2570	3401	3401	3401	3401	3401	3401	3401	3278	2642	1925	1564	1353	1223	1141	1094
21	902	1103	1382	1784	2398	3401	3401	3401	3401	3401	3401	3401	3268	2625	1906	1542	1328	1194	1108	1055
22	878	1068	1328	1700	2262	3178	3401	3401	3401	3401	3401	3401	3258	2609	1889	1523	1306	1169	1079	1021
23	858	1038	1283	1630	2151	2990	3401	3401	3401	3401	3401	3401	3249	2596	1874	1506	1287	1147	1054	992
24	840	1012	1244	1572	2058	2837	3401	3401	3401	3401	3401	3401	3241	2583	1860	1490	1270	1128	1032	967

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS			
12" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
1/4"	750	1500	6250

NOTE: The above values are based on block capacity only and do not reflect the capacity of the cable you use. Consult your wire rope manufacturer for the RWL for your particular cable.

HEAD BLOCKS - Limits of Use

12" Single Purchase Underhung with Beam Clips

THESE TABLES APPLY TO JRC PART NUMBERS:

1CS-101259R REV 6
1XS-61259R REV 6
1XS-81259R REV 7

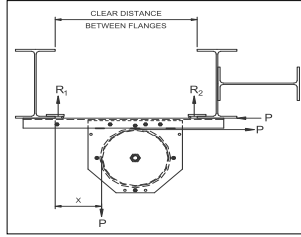
Headblock Load Rating Table Instructions

NOTE: There are individual tables for each size and orientation of head block

- Review the LIMITS OF USE section shown on the right hand side of this document. If your project does not meet the LIMITS OF USE, please contact J R Clancy for further information.
- Review the project for the exact requirements of your specific head block. You will need to know the following information prior to using the head block load rating tables.
 - Orientation of block (upright or underhung) and for underhung, the attachment method.
 - Size of the block (sheave diameter at 8", 12" or 16")
 - The clear distance between the supporting head steel flanges (NOT the beam centerline distance).
 - The distance from the onstage side of the offstage beam flange to the offstage handline.
- Once you know the above information find the tables that match the size and orientation of the headblock you need.
- Once you have located the tables for your particular block, on TABLE 1, go to the leftmost column on the table labeled "Clear Distance Between Flanges" or "Center - Center Weld Distance". Read down until you find the distance specific to your project.
- Next find the "Distance Between Offstage Beam Flange and Handline (Dimension X)" across the top row of the spreadsheet.
- Where your selected Row and Column intersect will be the Gross Load Capacity (in lbs) of your headblock.
- Next find the cable diameter and sheave type in TABLE 2 below. Calculate the Tread Pressure Limited Capacity by multiplying the maximum individual line load x the number of lift lines.
- Your final maximum RWL for your head block will be the lesser of.
 - the Gross RWL from the Table, OR
 - the Tread Pressure Limited Capacity.

NOTE: The above values are based on block capacity only and do not reflect the capacity of the cable you use. Consult your wire rope manufacturer for the RWL for your particular cable.

Head Blocks - LIMITS OF USE



NOTE: RWL (Recommended Working Load) is a function of mounting conditions and is only valid when the following criteria are met:

- lines wrap 90° around the sheave, all hand lines wrap 180° around the sheave
 - headblocks mount on two beams, with the shaft between the beam centerlines.
 - able fleet angles are less than 1.5°.
- Underhung Headblocks, they shall be attached to structural steel in one of the following three methods:
- beam clip angles, min. two 2" x 1 1/4" x 1/4" angles, back to back bolted with two 1/2" gr 5 bolts.
 - formed clips with two 1/2" gr 5 bolts, from one of the following JRC part #'s :
 - 070-38850, 070-38875, 070-389100
 - 070-38850, 070-38875, 070-388100
 - welded directly to the beam, min. four 1/4" fillet welds at 1.5" in length ea.
- Bright Headblocks they shall be attached to structural steel by either b), or c) above. Onstage connection to structure must have the bolt bear directly against the hng steel in shear.
TACT J R CLANCY FOR OTHER MOUNTING CONDITIONS.

TABLE 1 - HEAD BLOCK GROSS LOAD CAPACITY (in lbs.) - 12" Single Purchase Underhung Head Block with Beam Clips

Clear Distance Between Flanges	Distance Between Offstage Beam Flange and Offstage Handline (Dimension "X")																			
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11		
10	447	474	504	538	577	622	675	737	812	904	1020									
11	471	497	527	560	598	641	691	750	819	902	1005	1133								
12	492	518	547	579	616	659	705	760	825	901	992	1105	1246							
13	511	536	565	597	632	672	717	769	829	899	983	1083	1205	1360						
14	528	553	581	612	646	685	728	777	833	898	974	1065	1173	1306	1473					
15	544	568	596	626	659	696	737	784	837	898	968	1049	1146	1263	1406	1477				
16	558	582	609	638	671	706	746	790	840	897	962	1037	1124	1228	1353	1403	1362			
17	571	595	621	650	681	715	753	796	843	896	957	1026	1106	1199	1310	1344	1298	1275		
18	583	607	632	660	690	723	760	800	845	895	952	1016	1090	1175	1274	1296	1229	1201		
19	595	618	643	670	699	731	766	805	847	895	948	1008	1076	1154	1244	1256	1181	1142		
20	605	628	652	678	707	738	771	809	849	894	945	1001	1064	1136	1218	1223	1141	1094		
21	615	637	661	686	714	744	777	812	851	894	942	994	1054	1120	1196	1194	1108	1055		
22	624	646	669	694	721	750	781	815	853	894	939	989	1044	1106	1176	1169	1079	1021		
23	632	654	676	701	727	756	785	818	854	893	936	983	1036	1094	1159	1147	1054	992		
24	640	661	683	707	732	760	789	821	855	893	934	979	1028	1083	1144	1128	1032	967		

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS

12" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
1/4"	750	1500	5250

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HEAD BLOCKS - Limits of Use

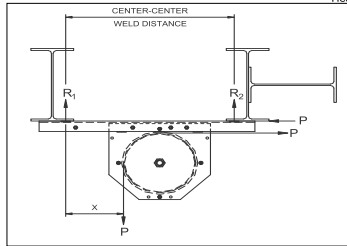
12" Single Purchase Underhung with Welds

THESE TABLES APPLY TO JRC PART NUMBERS: 1CS-101259R REV 6
 1XS-61259R REV 6
 1XS-81259R REV 7

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 - b. Size of the block (sheave diameter at 8", 12", or 16").
 - c. The clear distance between the supporting head steel flanges (NOT the beam centerline distance).
 - d. The distance from the onstage side of the offstage beam flange to the offstage handline.
 3. Once you know the above information find the tables that match the size and orientation of the headblock you need.
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 5. Next find the "Distance Between Offstage Beam Flange and Handline (Dimension X)" across the top row of the spreadsheet.
 6. Where your selected Row and Column intersect will be the Gross Load Capacity (in lbs) of your headblock.
 7. Next find the cable diameter and sheave type in TABLE 2 below. Calculate the Tread Pressure Limited Capacity by multiplying the maximum individual line load x the number of lift lines.
 8. Your final maximum RWL for your head block will be the lesser of:
 - a. the Gross RWL from the Table, OR
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 - ii. 070-38850, 070-38875, 070-388100
 - c) welded directly to the beam, min. four 1/4" fillet welds at 1.5" in length ea.
 - For Upright Headblocks they shall be attached to structural steel by either b), or c) above.
 - The onstage connection to structure must have the bolt bear directly against the mounting steel in shear.
- CONTACT J R CLANCY FOR OTHER MOUNTING CONDITIONS.

TABLE 1 - HEAD BLOCK GROSS LOAD CAPACITY (in lbs.) - 12" Single Purchase Underhung Head Block with Welds

Center - Center Weld Distance	Distance Between Offstage Weld Centerline and Offstage Handline (Dimension "X")																	
	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
10	2533	2679	2843	3029	3240	3401	3401	3401	3401	3401	3401	3401						
11	2030	2786	2947	3127	3331	3401	3401	3401	3401	3401	3401	3401	2515					
12	1702	2517	3039	3215	3401	3401	3401	3401	3401	3401	3401	3391	2449	1998				
13	1497	2096	3122	3292	3401	3401	3401	3401	3401	3401	3401	3349	2396	1832	1702			
14	1357	1833	2814	3352	3401	3401	3401	3401	3401	3401	3401	3314	2353	1879	1636	1510		
15	1256	1653	2274	3327	3401	3401	3401	3401	3401	3401	3401	3284	2316	1836	1583	1445	1376	
16	1178	1522	2042	2882	3401	3401	3401	3401	3401	3401	3396	3258	2285	1799	1540	1392	1310	1277
17	1118	1423	1873	2578	3401	3401	3401	3401	3401	3401	3387	3161	2258	1768	1503	1348	1257	1211
18	1069	1345	1745	2356	3361	3401	3401	3401	3401	3401	3380	3151	2235	1741	1472	1311	1214	1158
19	1028	1262	1644	2188	3063	3401	3401	3401	3401	3401	3373	3143	2215	1718	1445	1280	1177	1114
20	995	1230	1553	2056	2837	3401	3401	3401	3401	3401	3366	3135	2197	1698	1422	1254	1146	1078
21	966	1187	1496	1950	2659	3401	3401	3401	3401	3401	3361	3128	2181	1680	1402	1230	1119	1047
22	941	1150	1440	1862	2516	3401	3401	3401	3401	3401	3356	3122	2166	1664	1384	1210	1096	1020
23	920	1119	1393	1789	2398	3401	3401	3401	3401	3401	3351	3116	2153	1649	1368	1192	1076	997
24	901	1091	1352	1727	2299	3256	3401	3401	3401	3401	3347	3111	2141	1636	1353	1176	1058	976

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS

12" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
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