HEAD BLOCKS - Limits of Use

16" Single Purchase Underhung with Beam Angles

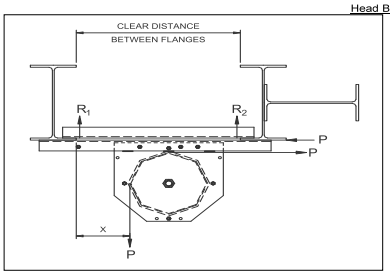
THESE TABLES APPLY TO JRC PART NUMBERS: 1CS-81659R REV 3

Headblock Load Rating Table Instructions

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

1. 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.
2. 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:
   a. Orientation of block (upright or underhung) and for underhung, the attachment method.
   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.
4. 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.
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
   b. 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:

a) beam clip angles, min. two 2" x 1 1/4" x 1/4" angles, back to back bolted with 1/2" gr 5 bolts..
b) formed clips with two 1/2" gr 5 bolts, from one of the following JRC part #'s :
   i. 070-38650, 070-38675, 070-386100
   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) ab
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.) - 16" Single Purchase Underhung Head Block with Beam Angles

Clear Distance Between Flanges	Distance Between Offstage Beam Flange and Offstage Handline (Dimension "X")																	
	-8	-7	-6	-5	-4	-3	-2	-1	0	2	3	4	5	6	7	8	9	10
10	1939	2042	2158	2286	2431	2596	2785	3003	3258	3258								
11	2051	2155	2269	2397	2540	2701	2885	3094	3337	3337	4363							
12	2152	2256	2370	2496	2637	2794	2972	3173	3404	3404	4353	4799						
13	2085	2348	2461	2585	2723	2877	3048	3242	3461	3461	4345	4748	2973					
14	1667	2432	2543	2666	2801	2950	3116	3302	3512	3512	4338	4707	2921	2208				
15	1423	1979	2619	2739	2871	3016	3177	3356	3556	3556	4332	4671	2878	2157	1809			
16	1263	1681	2363	2806	2935	3076	3232	3404	3596	3596	4327	4641	2842	2114	1758	1564		
17	1149	1485	1997	2845	2993	3130	3281	3447	3631	3631	4322	4615	2811	2078	1716	1513	1398	
18	1065	1346	1758	2396	3046	3180	3326	3486	3663	3663	4318	4593	2785	2048	1680	1471	1348	1279
19	1000	1243	1588	2101	2912	3225	3367	3522	3691	3691	4315	4573	2761	2021	1649	1435	1305	1228
20	948	1163	1462	1892	2546	3267	3404	3554	3717	3717	4312	4555	2741	1998	1623	1405	1270	1186
21	905	1100	1364	1737	2287	3145	3439	3584	3741	3741	4309	4539	2723	1978	1600	1379	1240	1151
22	870	1048	1287	1617	2094	2818	3471	3611	3763	3763	4307	4525	2706	1960	1580	1356	1213	1120
23	841	1005	1223	1522	1945	2575	3500	3636	3783	3783	4304	4512	2692	1944	1562	1336	1191	1094
24	815	969	1171	1444	1826	2387	3258	3659	3801	3801	4302	4500	2679	1929	1546	1318	1170	1071

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS

16" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
1/4"	1000	2000	7000
3/8"	1500	3000	10500

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

16" Single Purchase Underhung with Beam Clips

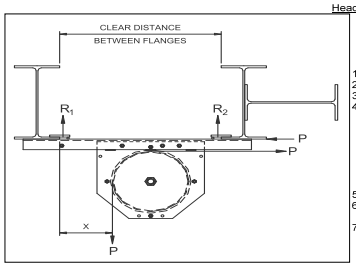
THESE TABLES APPLY TO JRC PART NUMBERS: 1CS-81659R REV 3

Headblock Load Rating Table Instructions

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

1. 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.
2. 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:
   a. Orientation of block (upright or underhung) and for underhung, the attachment method.
   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.
4. 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.
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
   b. 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:

1. All lift lines wrap 90° around the sheave, all hand lines wrap 180° around the sheave.
2. All headblocks mount on two beams, with the shaft between the beam centerlines.
3. All cable fleet angles are less than 1.5°.
4. For Underhung Headblocks, they shall be attached to structural steel in one of the following three methods:
   a) 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..
   b) formed clips with two 1/2" gr 5 bolts, from one of the following JRC part #'s :
      i. 070-38650, 070-38675, 070-386100
      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.
5. For Upright Headblocks they shall be attached to structural steel by either b), or c) above.
6. The onstage connection to structure must have the bolt bear directly against the mounting steel in shear.
7. CONTACT J R CLANCY FOR OTHER MOUNTING CONDITIONS.

TABLE 1 - HEAD BLOCK GROSS LOAD CAPACITY (in lbs.) - 16" Single Purchase Underhung Head Block with Beam Clips

Clear Distance	Distance Between Offstage Beam Flange and Offstage Handline (Dimension "X")																	
Between Flanges	-8	-7	-6	-5	-4	-3	-2	-1	0	2	3	4	5	6	7	8	9	10
10	404	425	449	476	506	540	580	625	678	678								
11	427	448	472	499	529	562	600	644	694	694	908							
12	448	470	493	520	549	582	618	660	708	708	906	999						
13	467	489	512	538	567	599	634	675	720	720	904	988	1090					
14	485	506	529	555	583	614	649	687	731	731	903	980	1071	1180				
15	501	522	545	570	598	628	661	699	740	740	902	972	1055	1153	1271			
16	516	537	559	584	611	640	673	708	748	748	901	966	1042	1130	1235	1362		
17	530	550	573	597	623	652	683	717	756	756	900	961	1030	1111	1206	1318	1398	
18	543	563	585	608	634	662	692	726	762	762	899	956	1021	1095	1181	1281	1348	1279
19	555	575	596	619	644	671	701	733	768	768	898	952	1012	1081	1159	1250	1305	1228
20	566	585	606	629	654	680	709	740	774	774	897	948	1005	1068	1141	1224	1270	1186
21	576	595	616	638	662	688	716	746	779	779	897	945	998	1057	1125	1201	1240	1151
22	586	605	625	647	670	695	722	752	783	783	896	942	992	1048	1110	1181	1213	1120
23	595	614	634	655	678	702	728	757	787	787	896	939	987	1039	1098	1163	1191	1094
24	604	622	642	663	685	709	734	762	791	791	895	937	982	1031	1086	1148	1170	1071

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS			
16" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
1/4"	1000	2000	7000
3/8"	1500	3000	10500

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

16" Single Purchase Underhung with Welds

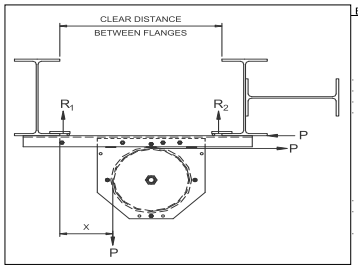
THESE TABLES APPLY TO JRC PART NUMBERS: 1CS-81659R REV 3

Headblock Load Rating Table Instructions

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

1. 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.
2. 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:
   a. Orientation of block (upright or underhung) and for underhung, the attachment method.
   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.
4. 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.
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
   b. 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.



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:
- a) 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..
- b) formed clips with two 1/2" gr 5 bolts, from one of the following JRC part #'s :
  - i. 070-38650, 070-38675, 070-386100
  - 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.

16" Single Purchase Underhung Head Block with Welds

Center - Center Weld Distance	Distance Between Offstage Weld Centerline and Offstage Handline (Dimension "X")																	
	-8	-7	-6	-5	-4	-3	-2	-1	0	2	3	4	5	6	7	8	9	10
10	2290	2409	2541	2688	2854	3041	3254	3500	3785	3785								
11	2401	2519	2650	2795	2957	3139	3345	3580	3849	3849	4975							
12	2501	2619	2748	2891	3049	3226	3425	3649	3905	3905	4945	3670						
13	2012	2710	2837	2977	3132	3304	3495	3710	3953	3953	4921	3622	2492					
14	1665	2400	2918	3056	3206	3373	3558	3764	3995	3995	4899	3583	2445	1954				
15	1449	1977	2883	3127	3274	3435	3614	3812	4033	4033	4881	3549	2406	1908	1647			
16	1301	1712	2364	3192	3335	3492	3664	3855	4066	4066	4865	3520	2373	1869	1600	1447		
17	1193	1531	2039	2857	3391	3544	3710	3894	4096	4096	4851	3495	2345	1836	1562	1401	1307	
18	1111	1400	1818	2457	3443	3591	3752	3929	4123	4123	4839	3473	2320	1808	1529	1362	1261	1204
19	1047	1300	1656	2183	3008	3634	3790	3961	4147	4147	4828	3454	2298	1783	1501	1330	1223	1158
20	996	1222	1534	1984	2665	3674	3825	3990	4169	4169	4818	3436	2279	1762	1476	1301	1190	1120
21	953	1158	1438	1833	2416	3330	3858	4017	4189	4189	4810	3421	2262	1743	1455	1277	1162	1087
22	917	1106	1360	1714	2227	3012	3887	4041	4208	4208	4802	3407	2246	1726	1435	1256	1138	1059
23	887	1063	1297	1618	2078	2771	3889	4064	4225	4225	4794	3394	2233	1710	1419	1237	1116	1034
24	861	1026	1243	1539	1958	2581	3570	4085	4241	4241	4788	3382	2220	1697	1403	1220	1097	1013

Indicates dimension recommended in JRC Design Guide

TABLE 2 - MAXIMUM LINE LOADS

16" Sheave Line Load limited by Tread Pressure			
Cable Diameter	Cast	Steel	Nylon
1/4"	1000	2000	7000
3/8"	1500	3000	10500

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.