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# ENGINEERING DATA

Engineering data on Ultra-tec® Cable Railing products runs to over 250 pages.

**In this section, summary data is provided for cable flexing (pass-through resistance to 4" sphere) and a summary of loads by hardware part number on the following pages.**

Engineering data is available for the above and for selected metal frame configurations. Upon request, we will gladly supply a limited amount of back up engineering data that you need for a particular project without charge. Kindly indicate what data you need for your project, by referencing the Index of Calculations on the following cover pages, "Engineering Calculations for Cable Railing Systems" prepared by Ferrari Shields & Associates.

Please direct your request to:

**Customer Service**  
**Ultra-tec® Cable Railing Systems**  
**800-851-2961**  
**E-mail to: [info@ultra-tec.com](mailto:info@ultra-tec.com)**



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**ENGINEERING CALCULATIONS  
FOR  
CABLE RAILING SYSTEMS**

**Prepared for  
Ultra-tec® Cable Railing Systems  
Carson City, Nevada**

**Prepared by  
Ferrari Shields & Associates  
Reno, Nevada**

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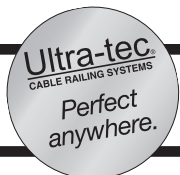


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**CHART FOR SECTION B  
WIRE-ROPE CABLE INTERMEDIATE RAIL PASS-THROUGH  
RESISTANCE TO 4" SPHERE**

CABLE DIAMETER	CTR-TO-CTR SPACING ON END POST	ANCHOR (END POST) SPACING	CABLE SUPPORT SPACING	CABLE SPREAD WITH 4" SPHERE LOAD APPLIED AS REQUIRED BY 2003 IBC CODE 1012.3
1/8"	3.10"	50 Ft.	42"	3.474"
3/16"	3.10"	50 Ft.	42"	3.439"
3/16"	3.25"	50 Ft.	42"	3.699"
1/4"	3.10"	50 Ft.	42"	3.405"
1/4"	3.36"	50 Ft.	42"	3.880"
5/16"	3.10"	50 Ft.	42"	3.368"
5/16"	3.25"	50 Ft.	42"	3.567"
5/16"	3.36"	50 Ft.	42"	3.735"
3/8"	3.10"	50 Ft.	42"	3.328"
3/8"	3.25"	50 Ft.	42"	3.513"
3/8"	3.36"	50 Ft.	42"	3.659"

PREPARED BY THE CABLE CONNECTION TO SUMMARIZE CALCULATIONS IN SECTION B, WIRE-ROPE CABLE PASS-THROUGH RESISTANCE TO 4" SPHERE. CALCULATIONS BASED ON 400 LBS. OF TENSION ON EACH CABLE.

For engineering calculations on a particular diameter cable, please direct your request to:

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## CHART FOR SECTION H SUMMARY OF LOADS BY PART

Part No.	Description	Ultimate Load Load (Lbs.)	Average Allowable Load (Lbs.)
A-J62	Adjust-A-Jaw® Tensioner	2173	1085
A-J82	Adjust-A-Jaw® Tensioner	3134	1565
A-J122	Adjust-A-Jaw® Tensioner	4262	2130
A-JTB6	Adjust-A-Body® Tensioner	2022	1010
A-JTB8	Adjust-A-Body® Tensioner	3320	1660
A-JTE62	Adjust-A-Body® Tensioner	2120	1060
A-JTE82	Adjust-A-Body® Tensioner	3364	1680
F-4	Ferrule	1416	705
F-6	Ferrule	2022	1010
F-8	Ferrule	3134	1565
F-10	Ferrule	4262	2130
F-12	Ferrule	3560	1780
F-J62	Fixed Jaw	2317	1155
F-J82	Fixed Jaw	4010	2005
F-J122	Fixed Jaw	4315	2155
F-T6-5B	Fixed Tab	2317	1155
F-T8-5B	Fixed Tab	4010	2005
R-6-12 thru R-6-52	Receiver	2652	1325
R-8-22 thru R-8-52	Receiver	3248	1620
R-12-32 thru R-12-52	Receiver	4595	2295
RF-4	Radius Ferrule	1580	790
RF-6	Radius Ferrule	2286	1140
RF-8	Radius Ferrule	4092	2045
RF-10	Radius Ferrule	4068	2030
RF-12	Radius Ferrule	3762	1880
S-4	Threaded Stud	1537	765
S-6	Threaded Stud	2652	1325
S-8	Threaded Stud	3248	1620
S-10	Threaded Stud	4595	2295
S-12	Threaded Stud	3994	1995
TT-6B	Threaded Tab	2120	1060
TT-8B	Threaded Tab	4262	2130
W-R6-5A	Welded Receiver (See Note)	2106	1050
W-R8-5A	Welded Receiver (See Note)	2335	1165

Note: Welded Receiver tested in un-welded configuration.

PREPARED BY THE CABLE CONNECTION TO SUMMARIZE CALCULATIONS IN SECTION H, LABORATORY TESTING OF CABLE HARDWARE COMPONENTS.

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