

## Appendix O: Raychem® RHW 2-Hour Fire-rated Power Cable

### Conduit Percentage Fill Calculation Chart

#### Scope

This chart provides the appropriate conduit size for running multiple Raychem RHW 2-hour fire-rated cables within one conduit. The National Electrical Code Chapter 9 Table 1 and the Canadian Electrical Code Table 8 require that percentage fill ratio shall not exceed 40% for more than 2 cables in a conduit.

The cable must be installed in conduit utilizing steel couplings, in accordance with manufacturer's instructions and the instructions of Electrical Circuit Protective System #27 found in the UL Fire Resistance Directory.

**Table O.1 EMT Sizing Chart for Raychem RHW Cables – Number of Raychem RHW Cables by Conduit Size\***

Raychem RHW		EGC		EMT Size								
AWG	Diameter (in)	AWG	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
14	0.21	14	2	5	9	15	21	35	61	93	121	155
12	0.23	12	2	4	7	13	18	29	51	78	102	130
10	0.25	10	N/A	4	6	11	15	25	44	66	87	111
8	0.33	10	N/A	N/A	N/A	6	8	13	24	36	48	61
6	0.37	8	N/A	N/A	N/A	5	6	11	19	29	38	49
4	0.41	8	N/A	N/A	N/A	3	5	8	15	23	30	38
3	0.44	8	N/A	N/A	N/A	3	4	7	13	20	26	34
2	0.47	8	N/A	N/A	N/A	3	4	6	11	18	23	30
1	0.58	8	N/A	N/A	N/A	N/A	N/A	4	8	12	16	20
1/0	0.62	6	N/A	N/A	N/A	N/A	N/A	4	7	11	14	18
2/0	0.67	6	N/A	N/A	N/A	N/A	N/A	3	6	9	12	15
3/0	0.72	6	N/A	N/A	N/A	N/A	N/A	3	5	8	10	13
4/0	0.77	6	N/A	N/A	N/A	N/A	N/A	N/A	4	7	9	12
250	0.89	4	N/A	N/A	N/A	N/A	N/A	N/A	3	5	7	9
350	1	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	5	7
500	1.12	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	4	5

\*This table reflects the inclusion of a Raychem fire-rated equipment grounding conductor (EGC) of the size shown.

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