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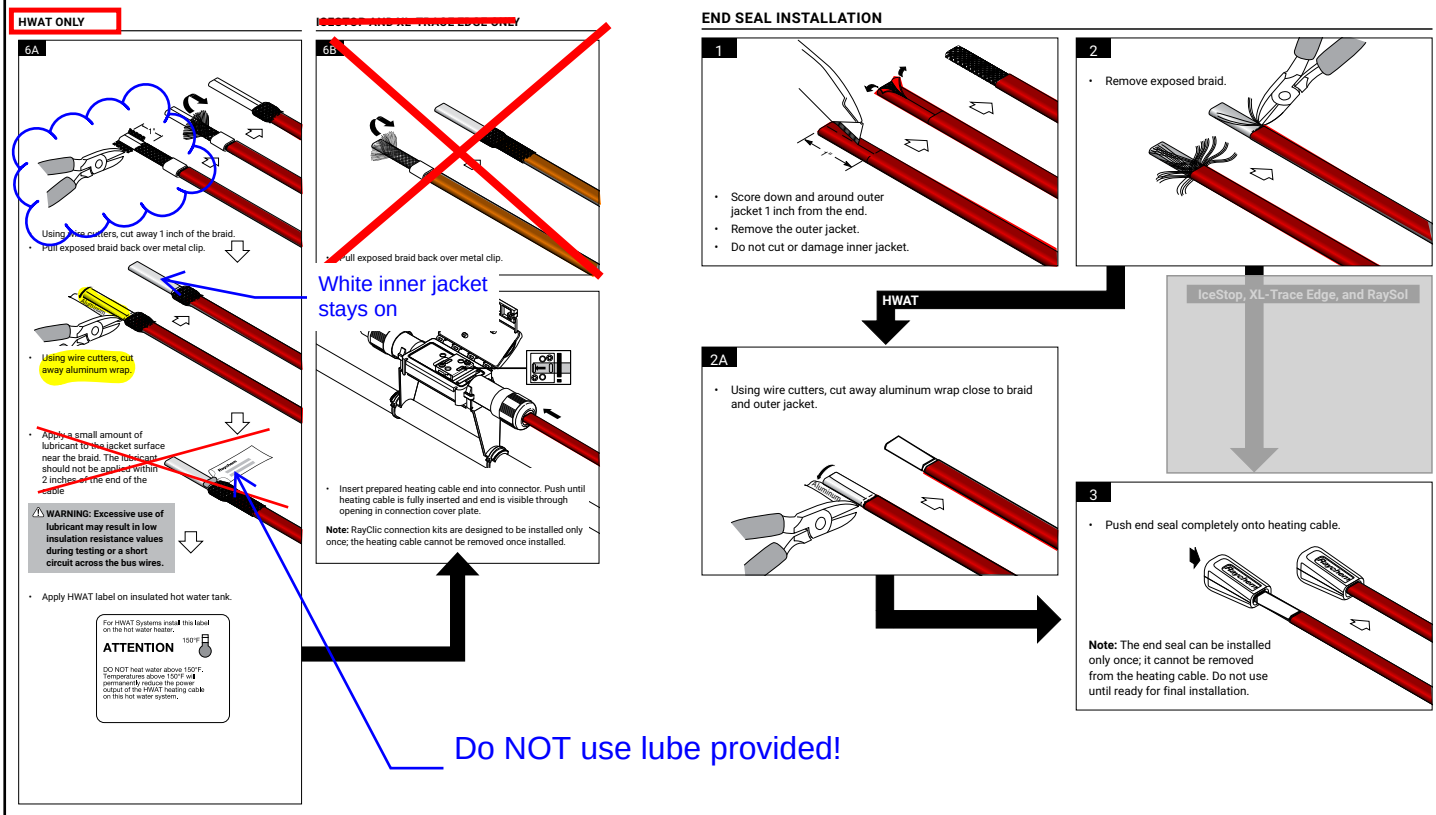
HWAT IO
https://www.nvent.com/sites/default/files/acquiadam/assets/Raychem-IM-H57548-HWATsystem-EN.pdf
RayClic PC install video
https://www.youtube.com/watch?v=gKUq8VqPLaw
General heat trace install video (Not XLTrace, different components)
https://www.youtube.com/watch?v=AFaVGKu3FWY

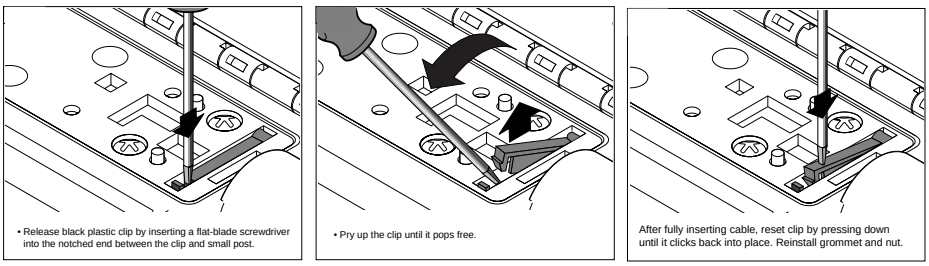
RayClic PC installation instructions
https://www.nvent.com/sites/default/files/acquiadam_assets/2022-10/RAYCHEM-IM-H55092-RayClicConnectionSystem-EN.pdf

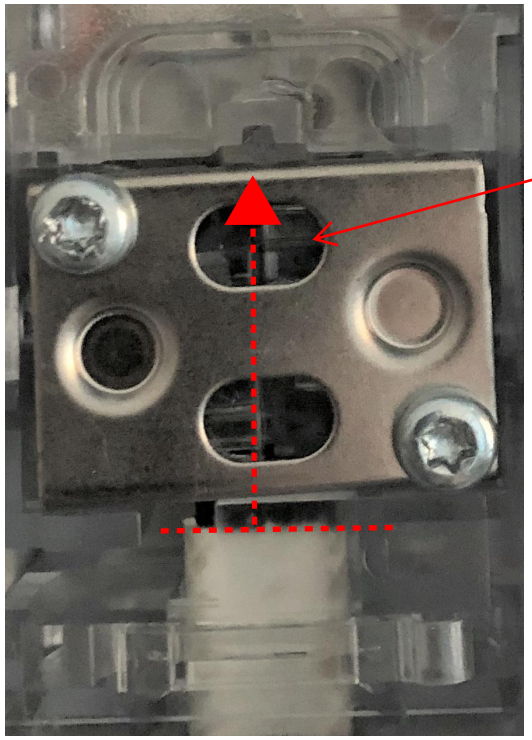
For HWAT (Heavy red cable) Do NOT go to 6B, You must remove 1" of braid and the aluminum wrap

For the end seal you must also remove the aluminum jacket in step 2A

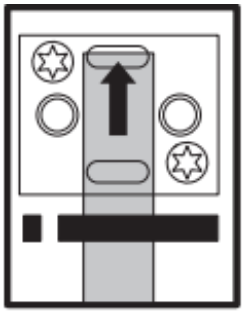


IT IS EASIER TO INSERT THE HWAT FULLY INTO THE RAYCLIC IF YOU LOOSEN/REMOVE THE SEALING GLAND AND RELEASE THE PULL OUT GATE

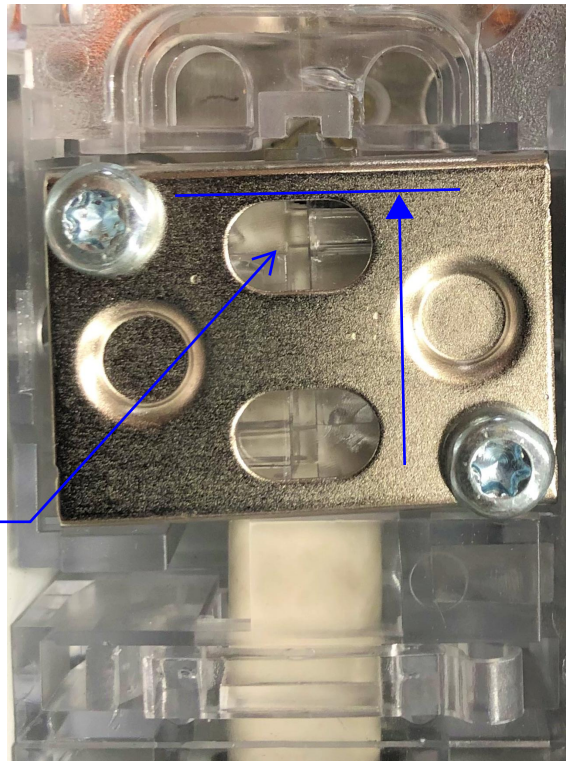


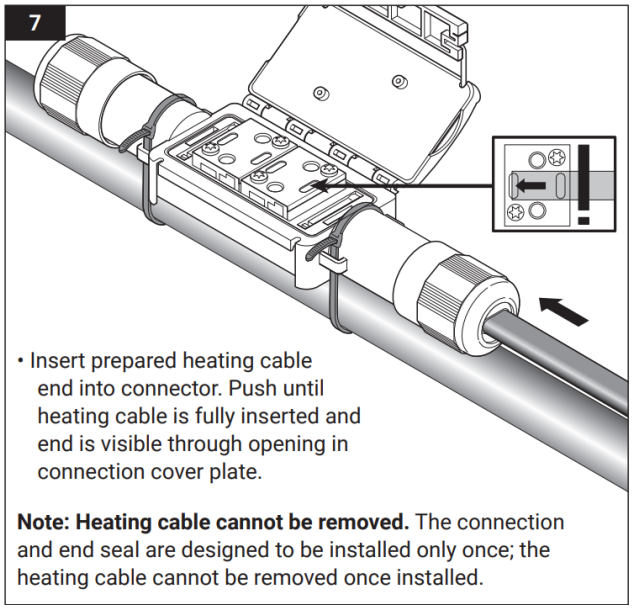


The heating cable inner jacket should be visible in both windows



Heating cable inner jacket visible in top window





Find the powered RayClic instructions here:

https://www.nvent.com/sites/default/files/acquiadam/assets/RAYCHEM-IM-H55388-RayClicConnectionKits-EN.pdf

Rayclic Power IO video

https://www.youtube.com/watch?v=gKUq8VqPLaw

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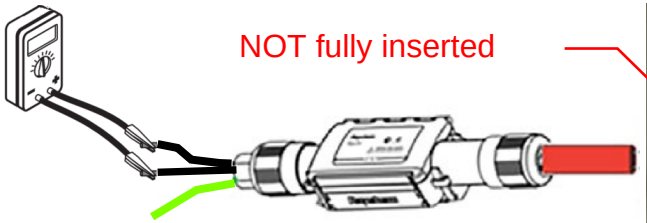
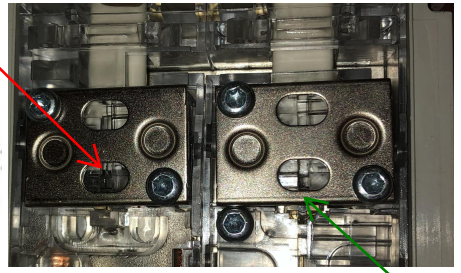
TITLE: Proper RayClic Cable Insertion		
SCALE NONE	DATE. 2/28/23	REV. A

"CORE" resistance

"CORE" resistance is read from Black to Black. This is reading across the heating core and should show 4-150 ohms depending on length and temperature. A longer cable should have a lower core resistance. If the reading is above 300 ohms be sure that the cable is fully inserted into the RayClic. Check the Rayclic screws for tightness. If below 3 ohms check for a bus wire to bus wire short or exceeded maximum circuit length.



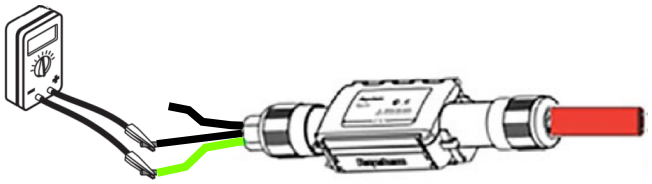
NOT fully inserted



You should see white inner jacket all the way into both windows

Capacitance Reading

The capacitance reading can be used to estimate length. For HWAT-R2 the factor is 5.8. The capacitance is read from the bus wire (black) to braid (green). The reading (in nano farads) times the factor (5.8) will give a rough estimate of the heating cable connected length. Note that if the is a bad IR reading the indicated length will be WRONG and the you will see a cable length as long as only one bus wire is connected. This should be used as an estimate only.

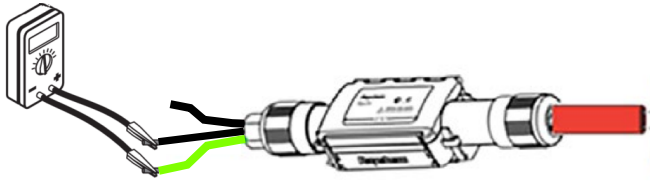


Heating Cable	Capacitance ft/nF
HWAT-R2	5.8

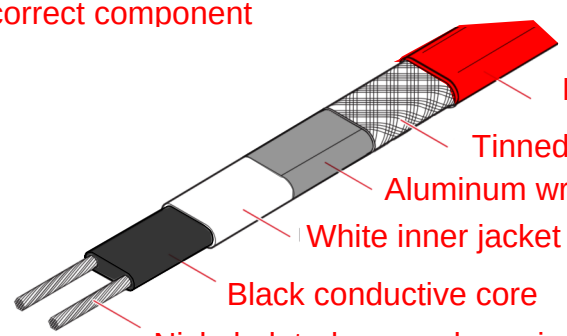
Estimated length = Capacitance reading (in nf) x 5.8

Insulation Resistance Testing (Meggering)

Insulation resistance testing is the electrical version of pressure testing a pipe. The resistance of the primary jacket is measured from the bus wire (black) to braid (green) at a high voltage to be sure there is no damage. Raychem requires this to be done up to 2500VDC because that is the voltage required to jump the thickness of the primary jacket. Readings below 1000M ohms at 2500VDC indicate damage or incorrect component installation.



Raychem requires a minimum insulation resistance (IR) of 1000 Mega ohms at 2500VDC



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TITLE: RAYCHEM HWAT IO Testing Diagrams		
SCALE NONE	DATE. 8/2/22	REV. A

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HWAT Test Results

Project

"Core" Bus wire to bus wire, ohms

"Capactance" Bus wire to braid, micro farads

"IR" Bus wire to braid, mega ohms

insulation resistance minimum passing >1000Mohms at 2500volts

Circuit	Core	Capacitance	IR @500vdc	IR @1000vdc	IR @2500vdc	NOTES