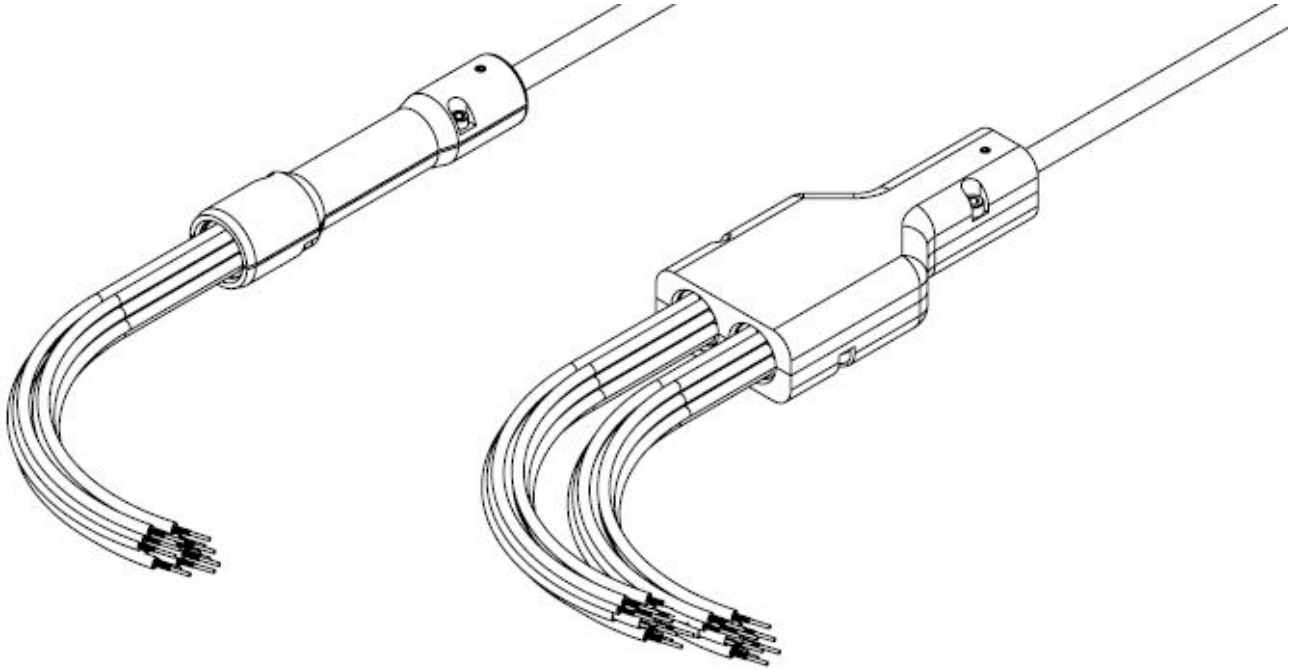
QGrip Single (2 – 12 Ch) and QGrip Dual (14 – 24 Ch) Customer Assembly Instructions



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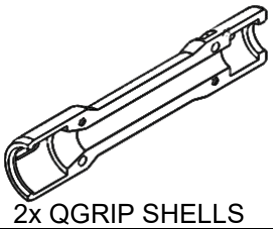
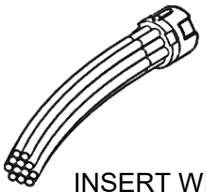
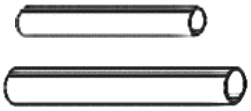
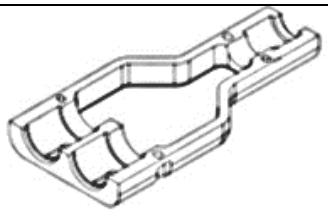
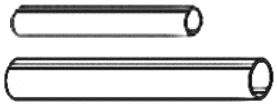
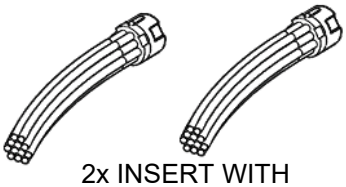
SCOPE

This document describes the Assembly Instructions for the Single (2 – 12 Channel) and Dual (14 – 24 Channel) QGrip breakout with optional Pulling Sock Extension.

COMPONENTS

QGrip Single (2 – 12 Channel)		
 2x QGRIP SHELLS	 INSERT WITH FURCATION TUBING	 HEAT SHRINK Size ½-inch & ¾-inch Diameters
 4x SHELL SCREW	 CRIMP and CRIMP SUPPORT	 2x CRIMP SET SCREWS

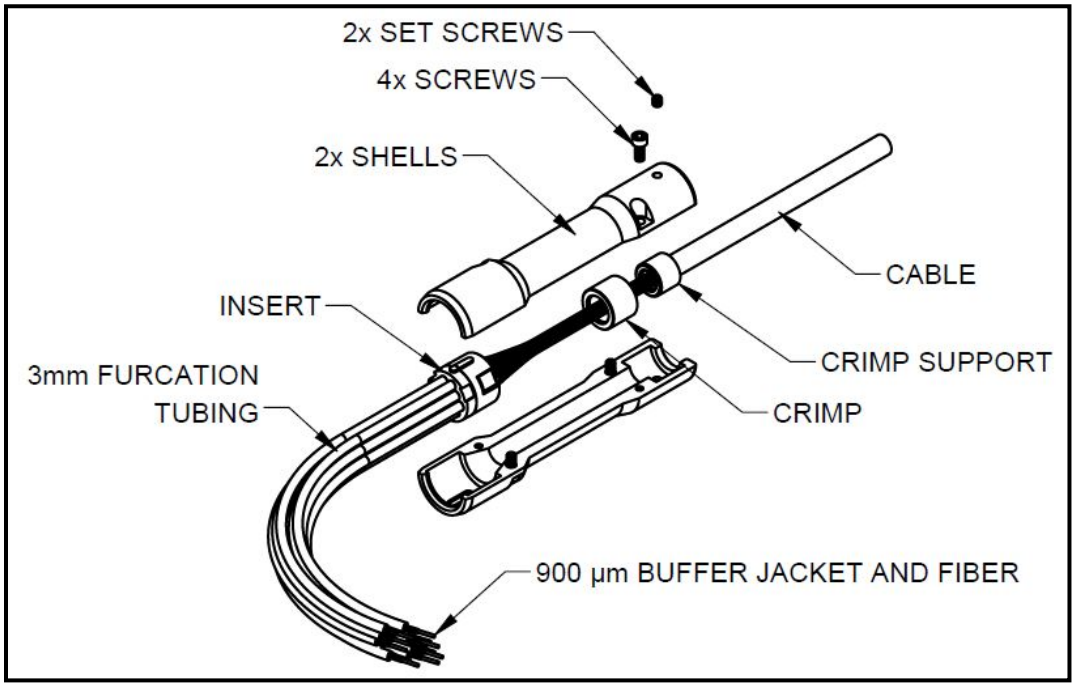
QGrip Dual (14 – 24 Channel)		
 2x QGRIP DUAL SHELL	 HEAT SHRINK Size ½-inch & 1-inch Diameters	 2x INSERT WITH FURCATION TUBING
 4x SHELL SCREW	 CRIMP and CRIMP SUPPORT	 2x CRIMP SET SCREWS

OPTIONAL COMPONENTS

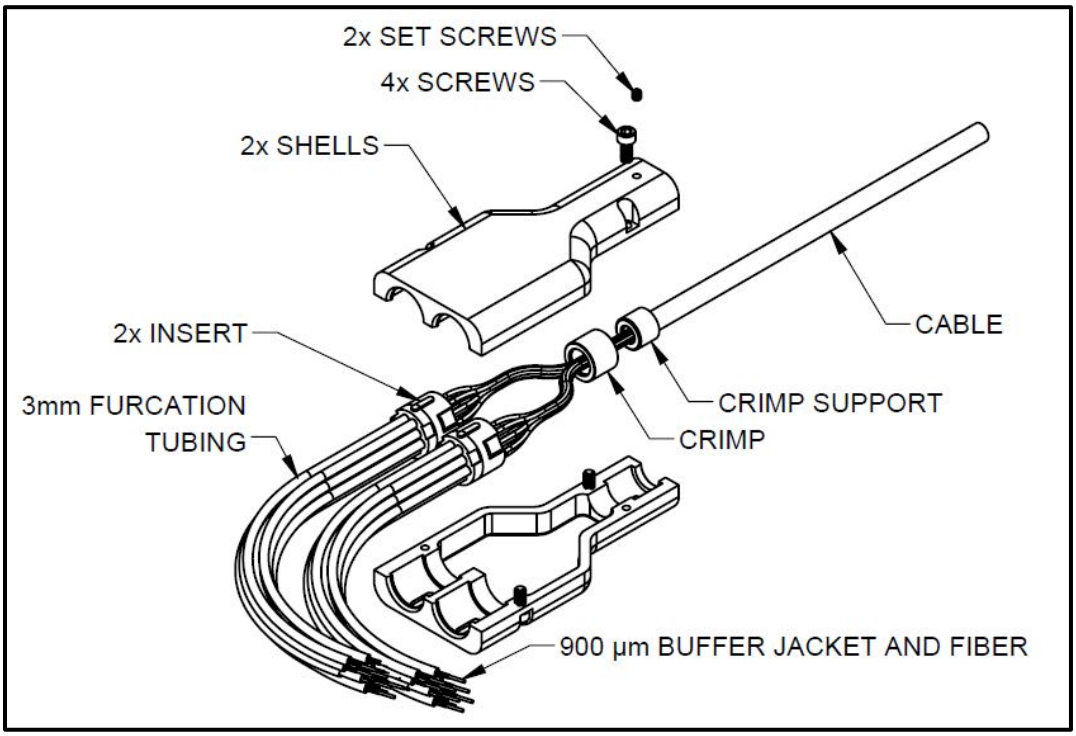
PULLING SOCK EXTENSION	
 PULL SOCK	 CONSTANT FORCE SPRING

EXPLODED VIEW OF COMPONENTS

QGrip Single (2 – 12 Channel)



QGrip Dual (14 – 24 Channel)



TOOL LIST

TK-060 QPC Cable and Connector Prep Tool Kit – (Equivalent tools may be used)	
PT-062	Miller Kevlar Scissors (Carbon Molybdenum & Vanadium Steel Blade)
PT-500	Precise-Control .050” Screwdriver (1.27mm) Hex
PT-501	Precise-Control Screwdriver, 1/16" Hex
PT-503	Precise-Control Screwdriver, 5/64" (2mm) Hex
PT-502	Precise-Control Screwdriver, 3/32" Hex
PT-504	Precise-Control Screwdriver, 2.5mm Hex
PT-505	Screwdriver, Number 1 Phillips, 6-3/4" Overall Length
PT-506	Dial Torque-Measuring Wrench, 3/8" Square Drive, 0 to 150in.-lbs. and 0 to 18NM Torque
PT-536	Crow's Foot Wrench Adjustable 3/8" Square Drive 0.0-1.125"(0-28.57mm)
PT-545	Crow's Foot Wrench Adjustable 1/2" Square Drive .236-1.771" (6-45mm)
PT-546	3/8" Female x 1/2" Male Square Drive Adapter, Chrome
PT-532	Long-Nose Pliers with Flat Jaws, Cushion Grip, 6-3/4" Overall, Manual Jaws with Wire Cutter
PT-599	Hex Bit Set, 5 pcs (.050", 1/16", 5/64", 3/32", 2.5mm) 1/4" Shank, Overall Length 2”
PT-590	Torque-Measuring Screwdriver, Hex Drive, 2.5 to 11.5 in.-lbs. Adjustable Torque
PT-591	4" Drill Press Vise with 2 x Machined Plastic Jaws with Groove

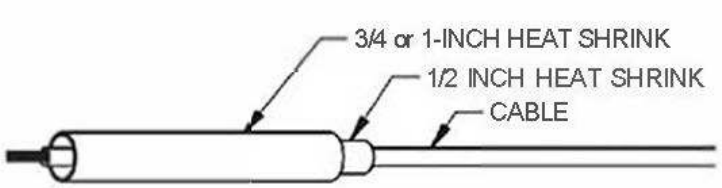
TK-049 QPC QGrip Tool Kit – (Equivalent tools may be used)	
PT-540	Hydraulic Crimping Tool
PT-541	Die Set, 0.324 Hex, Hydraulic Hand Crimper

TORQUE TABLE

Component	**Crimp Set Screws / Shell Screws**
Torque Values	5 – 6 in-lb
	.56 – .68 N • m

CABLE PREPARATION

Slide label onto cable if needed. Uncoil the furcation tubing and cut to desired length.

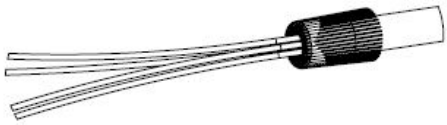


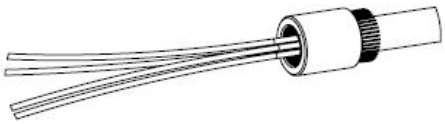
Slide the Heat Shrink tubes sizes ¾-inch diameter (5-inch long) for the Single QGrip or 1-inch diameter for the Dual QGrip over the cable. Slide the ½-inch diameter (4-inch long) over the cable.

STRIP CABLE

Strip the outer jacket from the cable, exposing the 900µm buffered fibers so that the fiber length exceeds the length of the furcation tubing by at least 7” to allow for approximately 3” (76mm) of fiber length inside the shell and approximately 4” (102mm) of fiber length for connector installation. Keep 2-inches of Kevlar for crimping.

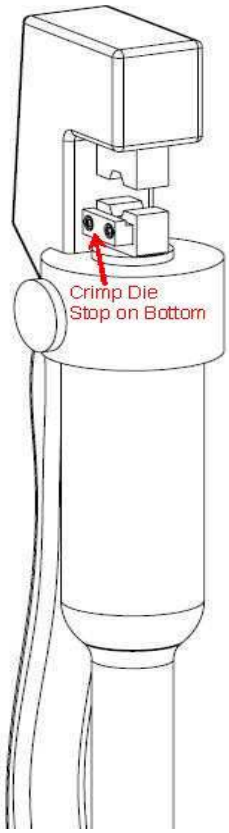
Slide Crimp Support over fiber and Kevlar so that it stops at the end of the jacket. Bend Kevlar back over the Crimp Support. Slide second Crimp over Kevlar and Crimp Support. Use Kevlar Scissors PT-062 to remove any excess Kevlar that is sticking out from the Crimp.

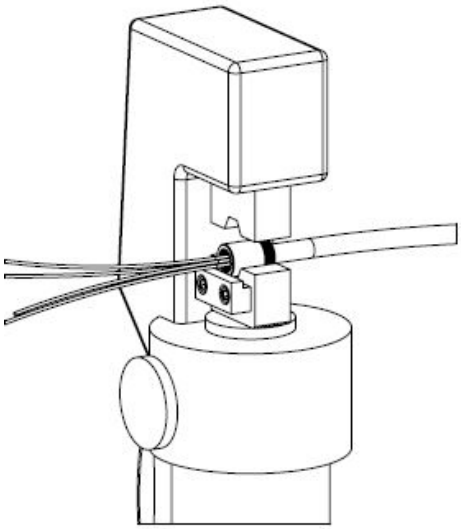


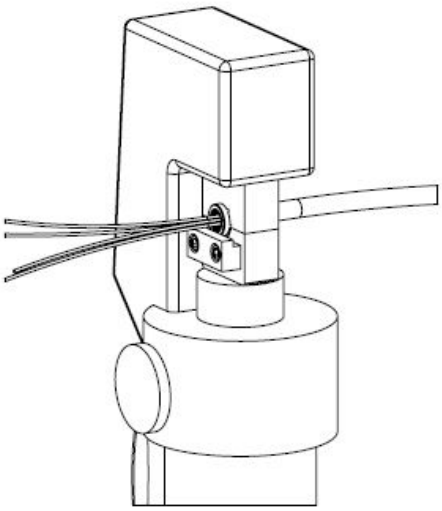


CRIMP CABLE

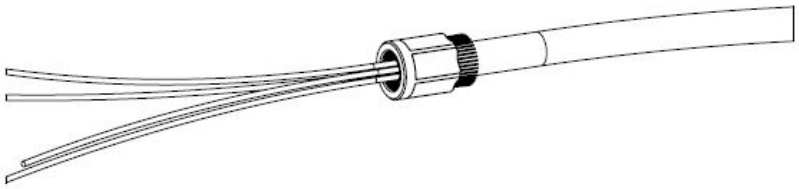
Setup the Hydraulic Crimping tool PT-540 with the Die Set PT-541. The Crimp Die with Stop needs to be placed on the bottom facing out and with the Crimp against the stop as seen in the image below. Turn the knob clockwise on the Hydraulic Crimper, so that the handles can be pumped to crimp. Place the cable in the lower Crimp Die with the fiber facing out. Pump the handles until the Crimp Dies are touching. Release crimp by turning knob counterclockwise.







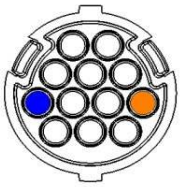
After crimping, the Crimp should have a hexagon shaped as seen below.

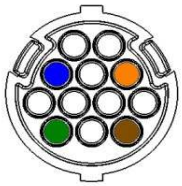


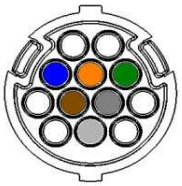
POPULATE INSERT

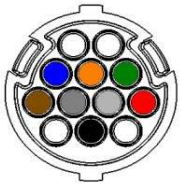
Pass each individual 900µm buffered fiber through the appropriate furcation tubing subunit. The fiber will protrude outside of furcation tubing.

See Color Chart Below for location of fibers depending upon QGrip channel count.


2 CHANNEL


4 CHANNEL

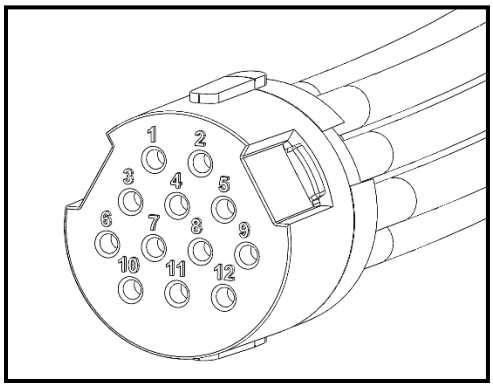

6 CHANNEL


8 CHANNEL


10 CHANNEL


12 CHANNEL

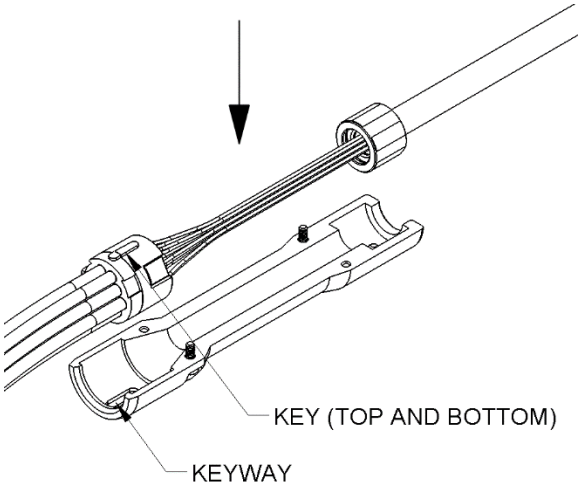
Channel	Color
1	Blue
2	Orange
3	Green
4	Brown
5	Slate
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Rose
12	Aqua



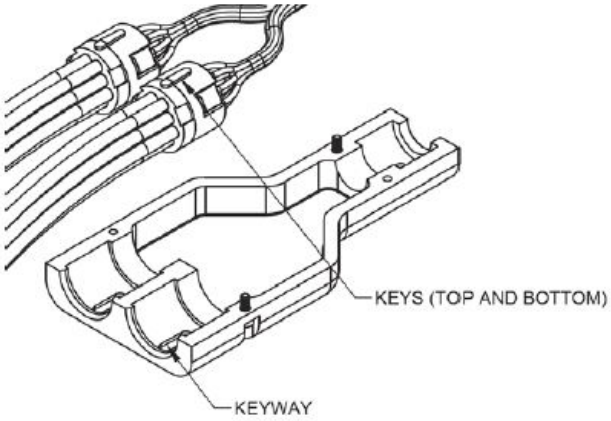
FINAL ASSEMBLY

Place the Crimp and insert subassembly into bottom shell. Make sure the insert key is aligned with the keyway in the lower shell and that the crimp rests fully in the shell cavity. Check to see that the fibers are not twisted and that they are all inside the shell cavity.

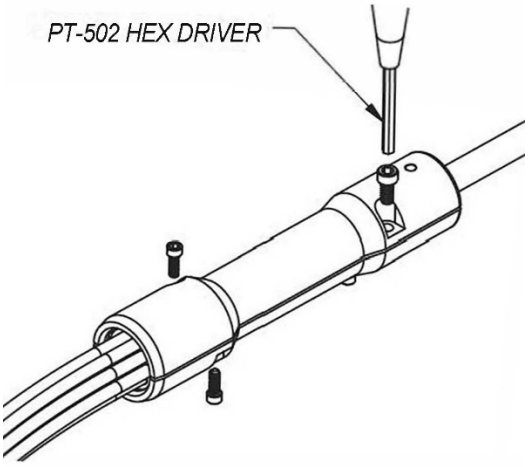
QGrip Single

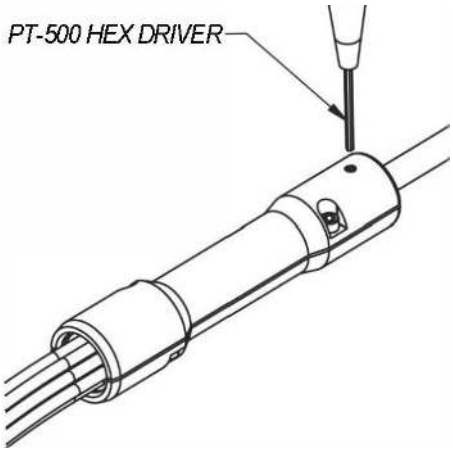


QGrip Dual



Install the upper shell and secure the 4x Shell Screws using a 3/32” Hex Driver PT-502. Torque using the PT-590 Torque-Measuring Screwdriver and PT-599 Hex Bit 3/32” to the values in the Torque Table above. After top shell is secure, fasten 2x Set Screws using .05” Hex Drive PT-500 to prevent the cable from rotating within the cavity. Torque using the PT-590 Torque-Measuring Screwdriver and PT-599 Hex Bit .05” to the values in the Torque Table above. Note: Do not rotate the cable until crimp set screws have been secured.





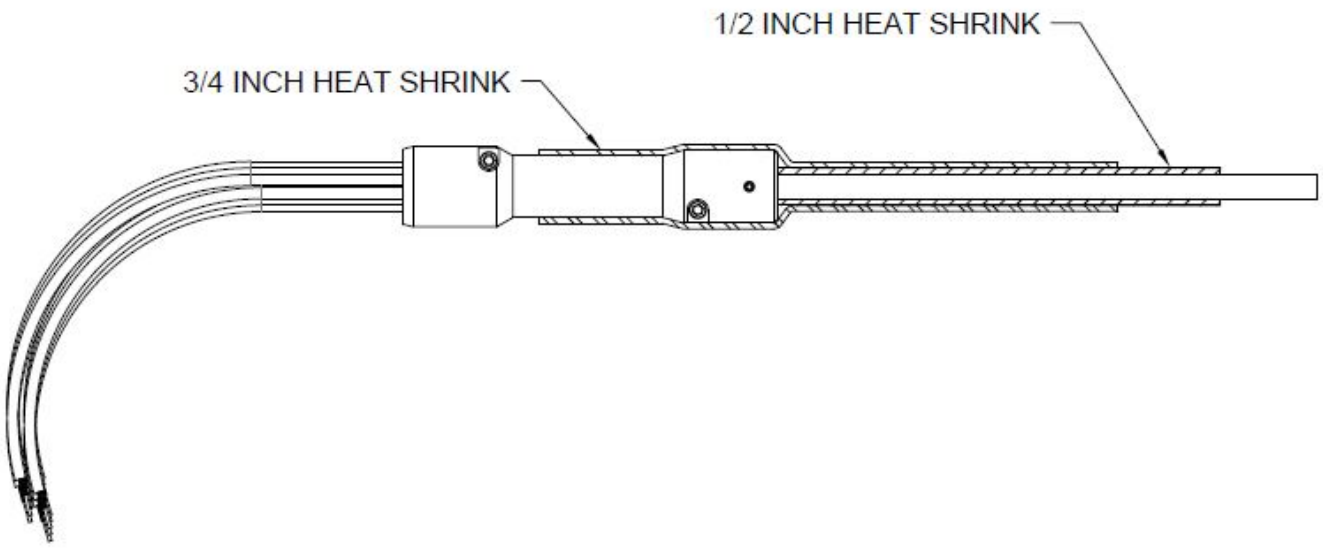
TERMINATE

Terminate, Polish and Test the Cable Assembly before applying the Heat Shrink.

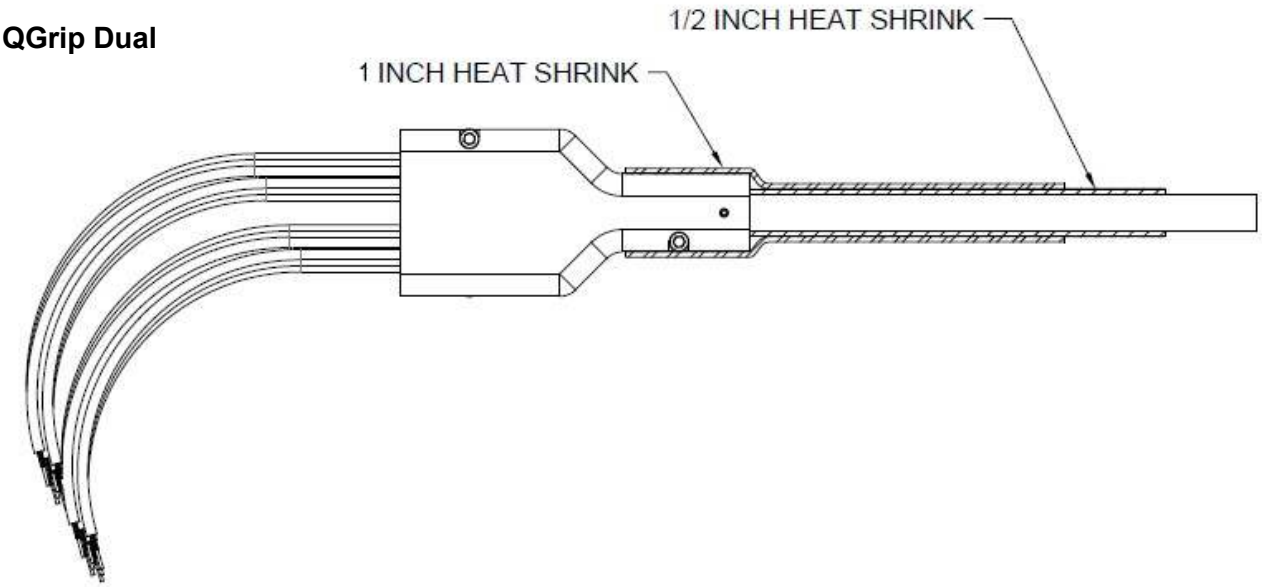
Heat Shrink

Activate the heat shrink on the cable and on the Shell of the QGrip. The ½-inch diameter Heat Shrink should be shrunk on the cable and touching the base of the QGrip where the cable exits. The end of the ¾-inch diameter Heat Shrink should cover the smaller diameter portion of the QGrip Shell. For the QGrip Dual, the 1-inch Heat Shrink should cover the smaller diameter portion of the QGrip Shell.

QGrip Single

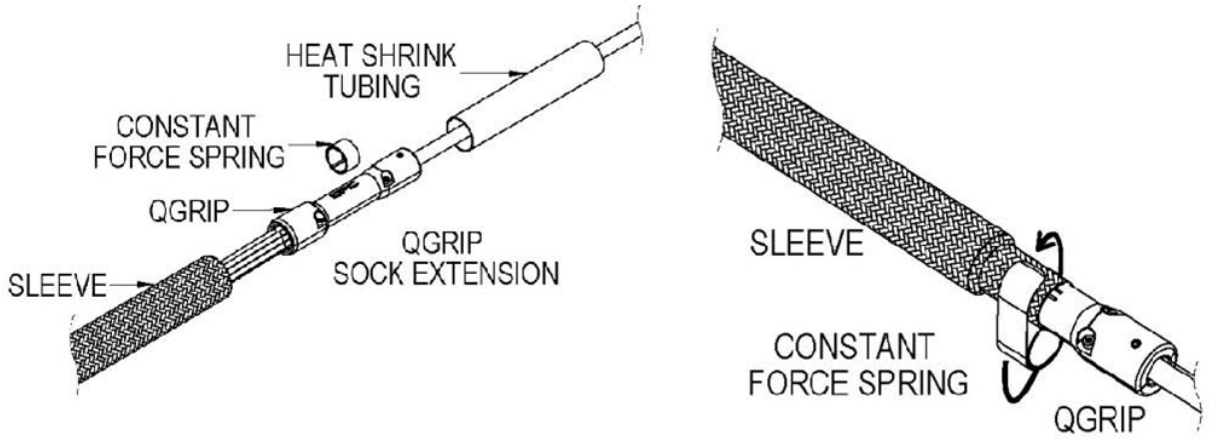


QGrip Dual



Heat Shrink with Optional Pulling Sock Extension

Slide the subunits through the Pull Sock. Slide the Pull Sock over the QGrip as seen in the image. Coil the constant force spring over the Pull Sock and around the small diameter portion of the QGrip Shell.



Activate the heat shrink on the cable and on the Shell of the QGrip. The ½-inch diameter Heat Shrink should be shrunk on the cable and touching the base of the QGrip where the cable exits

Now slide the ¾- inch heat shrink over the Constant Force Spring and shrink. For the Dual QGrip, slide the 1-inch heat shrink over the Constant Force Spring and shrink. Let Cool. Pull the end of the Pull Sock to verify that it has been secured.