INSTALLATION INSTRUCTIONS

Cutting & assembly guide
for wire & cable management

Adaptaflex



How to use this guide

Selecting a conduit system

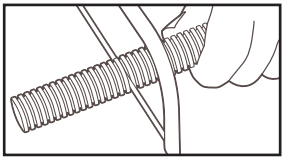
Selecting a conduit system
Choose the Adaptaflex conduit system you are about to install. Turn to the appropriate section in this guide. On each page in the guide you will find an illustration of the conduit type and a typical fitting.

Tools required
Tools required to cut the conduit and assemble the fitting will be illustrated here.

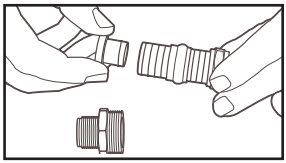


The full range of tools are illustrated opposite. N.B., not all tools are applicable to all conduits.

Cutting the conduit
Illustrations show you how to cut the conduit cleanly and accurately.



Fitting assembly
How to assemble and securely fix the fitting to the conduit.



Contents

002 How to use this guide
002 Contents - quick product finder
003 Tools required - range of tools required and available from Adaptaflex

Non-metallic systems

004 **ADAPTALOK** - One-piece push-on Liquid tight IP66 fittings and Adaptalok ATS IP68 and IP69 fittings
005 **ADAPTALOK** - Clip together 'JUMBO' IP40 fittings
006 **ADAPTASEAL** - Liquid tight compression fittings and accessories
006 **ADAPTARING** - Liquid tight compression fittings and accessories
007 **KORIFIT** - Type KF specialist non-metallic conduit and fittings
007 **XTRAFLEX** - Type XF & RF specialist non-metallic conduit and fittings
006 **Hi-Spec** - Type PKTC, PKSS, PRTC, PRSS Specialist low fire hazard and EMI screen conduit

Metallic systems

009 **ADAPTASTEEL** - Type S and SS flexible steel conduit and Type S fittings
009 **ADAPTASTEEL** - Type SP, SN and LFH-SP Covered steel flexible conduit and Type SP fittings
010 **ADAPTASTEEL** - Type LFH-SPL, SPL-EF & F&B Type SAM Covered steel flexible conduit & Type SPL fittings
011 **ADAPTASTEEL** - Type SB, STC, SSB & SSBGS Specialist EMI screen conduit & SB fittings
011 **ADAPTASTEEL** - Type SPB & SPTC specialist Liquid resistant, EMI Screen conduit and Type SPB fitting
011 **ADAPTASTEEL** - Type SPLHCB specialist liquid tight high strength conduit & Type SPLB fittings

Tools required

Standard hand & specialist tools

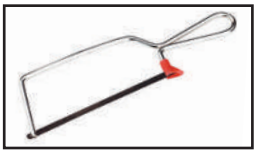
Standard hand tools



Utility knife. **Note:** Do not use to cut conduit for use with Adaptalok & ATS fiiting as IP integrity cannot be maintained.



Tin snips.



Junior hacksaw.



Groove joint plier or adjustable spanner.



Fine tooth hacksaw - minimum 32TPI. **Note:** When cutting braided conduit use insulating tape.

Specialist tools

Required to maintain IP integrity. Designed to speed up installation and available from Adaptaflex.



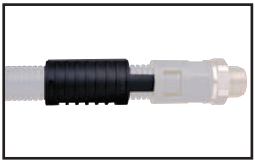
Kwickcut
Up to 32mm / 1" conduit.



Rotocut
20 & 25mm / 1/2 & 3/4" conduit.



Cut-vice
Between 10 - 32mm / 1/4 - 1" conduit.

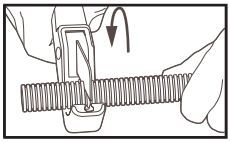


Adaptalok removal tool
All sizes.

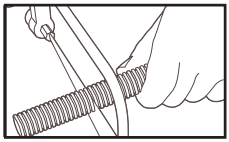
Non-metallic systems

Adaptalok & Adaptalok ATS™ with Type PA, PR, CP, PADL, PF & PP

Cutting the conduit



Use the Kwikcut cutting tool. **Note:** Do not use a utility knife to cut conduit for use with Adaptalok & ATS fiiting as IP integrity cannot be maintained.

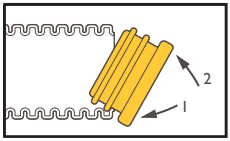


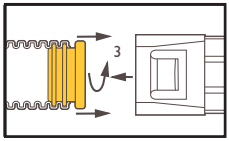
Or use a fine-tooth hacksaw. De-burr as necessary.

Tools required

- Kwikcut cutting tool, fine-tooth hacksaw
- Adaptalok removal tool to assist fitting removal

Adaptalok IP67, IP68 & IP69 seal

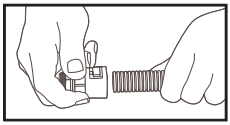




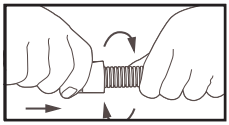
NOTE:
This seal is to be used with Adaptalok AL fittings only to achieve advised IP ratings. Not to use with Adaptalok ATS fittings.

1) Angle seal approx. 30º and push one half to engage 2 ribs.
2) Push down on the ribs and feed the second half of the seal into the conduit.
3) Push conduit into Adaptalok as normal - see below.

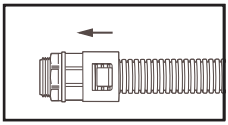
Fitting assembly



Offer up the fitting.

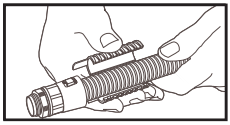


Push and twist to ensure a firm fit and seal.

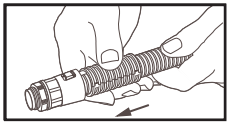


Pull back the fitting to ensure fittings lugs have properly located in conduit groove.

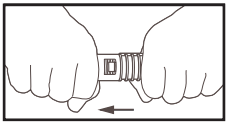
Fitting removal



Apply the tool over the conduit.



Align with fitting lugs and push tool into fitting.



Holding the removal tool, pull the fitting from the conduit.

Hints and tips

Ensure the cutting of the conduit is square and the cut remains in the 'valley' of the corrugation. Adaptalok & ATS fittings can also be removed by lifting the locking tabs with a small screwdriver and easing the fitting off the conduit, but we rcommend you use the removal tool. Seal accessory is only required if you want to upgrade Adaptalok performance from IP66 to IP67/8/9.

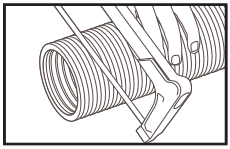


Use the Kwikcut cutting tool or use a fine-tooth hacksaw. **Note:** Do not use a utility knife to cut conduit for use with Adaptalok & Adaptalok ATS fitting as IP integrity cannot be maintained.

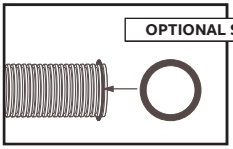
Non-metallic systems

Adaptalok with Type PA & PR Jumbo

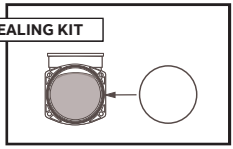
Cutting the conduit



Securely clamp the conduit and cut using a fine tooth hacksaw, in the valley of the corrugation.



Locate the flat sealing washer in the first conduit corrugation and proceed as below.

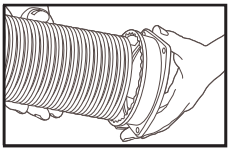


Fit the 'O' ring into the corresponding groove in the flange face.

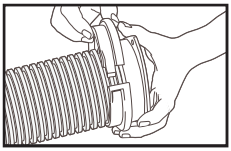
Tools required

- Fine-tooth hacksaw

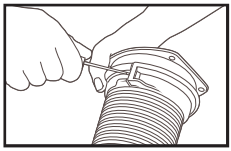
Fitting assembly - Straight flange



The straight flange fitting is assembled in a similar manner.



Clamping ring 'halves' are aligned and clipped together.



The clamping ring can be removed with a screwdriver if required.

Hints and tips

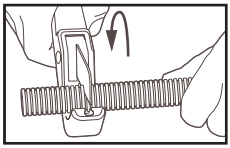
Ensure the cutting of the conduit is square and the cut remains in the 'valley' of the corrugation.

Remove any excess burr from the cut conduit.

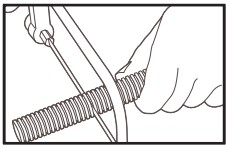
Non-metallic systems

Adaptaseal & Adaptaring with Type PA, PR, CP, PF & PP

Cutting the conduit



Use the Kwikcut cutting tool.

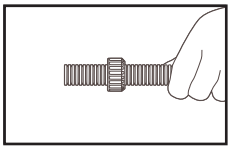


Use a fine-tooth hacksaw. De-burr as necessary.

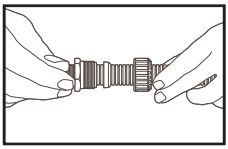
Tools required

- Kwikcut cutting tool, fine-tooth hacksaw

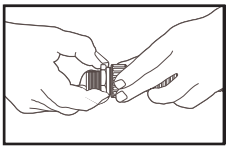
Fitting assembly - Adaptaseal



Apply the capnut over the end of the conduit.



Fit sealing ring over conduit, ensuring the ribs seat in valley of the conduit, chamfered end of ring towards capnut.

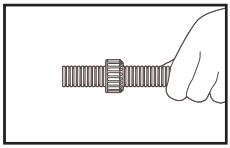


Offer fitting body up to sealing ring and fully tighten capnut by hand.

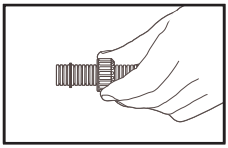
Hints and tips

Before the body of the fitting is positioned, there should be three rings of the conduit visible after the seal or ‘Cring’ is fitted. Fitting of an anti-vibration washer (type AWB), between capnut and body, will prevent accidental disassembly and ensure integrity of assembled fitting.

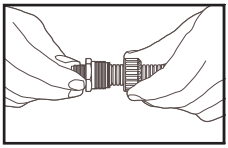
Fitting assembly - Adaptaring



Apply capnut over end of the conduit.



Fit ‘C-ring’ onto the conduit, chamfered end towards the capnut.

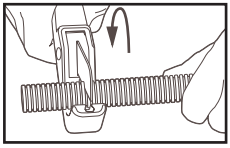


Apply the fitting body up to the ‘C-ring’ and fully tighten by hand.

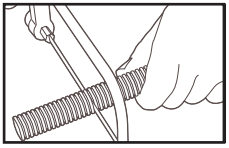
Non-metallic systems

Type KF, RF & XF

Cutting the conduit



Use the Kwikcut cutting tool.



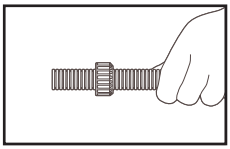
Use a fine-tooth hacksaw. De-burr as necessary.

Tools required

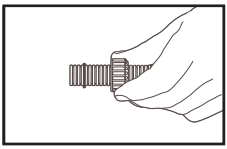
- Fine-tooth hacksaw
- Kwikcut cutting tool

Fitting assembly - Korifit 3 part fitting

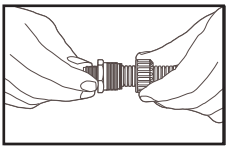
(push on fitting assembly is as for Adaptalok fittings - see pages 4-5)



Apply the capnut over the end of the conduit.



Fit 'C-ring' onto the conduit, chamfered end towards the capnut, and in the fourth corrugation groove.

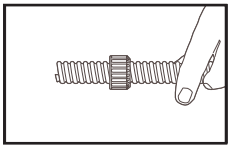


Apply the fitting body up to the 'C-ring' and fully tighten by hand.

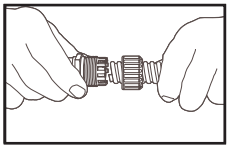
Hints and tips

When using push-on fittings with Korifit, use a push and twist action to ensure a good seal.

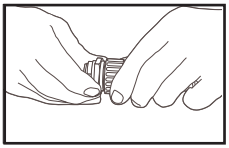
Fitting assembly - RF & XF fittings (13-32mm)



Apply capnut over conduit.



Insert conduit into fitting between 'barbs' and inner shoulder.

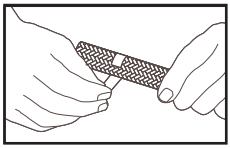


Fully tighten the capnut by hand.

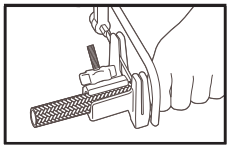
Metallic systems

Hi-spec with Type PKTC, PKSS, PRTC, PRSS, PFTC & PFSS

Cutting the conduit



Apply insulating tape at the cutting point - 2 revolutions recommended.

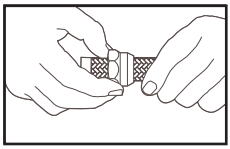


Securely clamp the conduit - preferably with a cut-vice. Cut through the centre line of the tape.

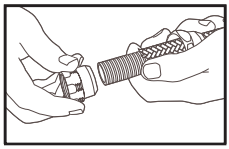
Tools required

- Kine-tooth hacksaw
- Cut vice
- Tin snips
- Adjustable grips or spanners
- Insulating tape

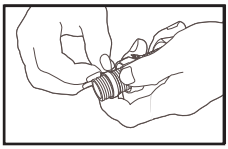
Fitting assembly



Apply the outer capnut over the braiding before removing tape.



Remove tape and pull back braided sheath. Apply inner capnut.

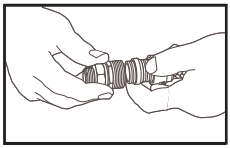


Apply sealing ring - chamfered edge towards capnut, 3 corrugations in from end of conduit.

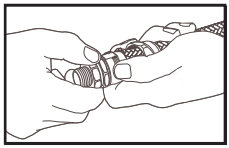
Hints and tips

Use tin snips as required to trim the braiding after cutting with hacksaw.

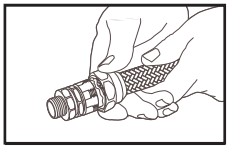
Other types of tape such as parcel tape, masking tape etc, can be used to facilitate cutting.



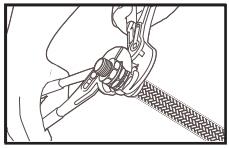
Apply body over conduit.



Hand tighten body of fitting onto inner capnut.



Position braiding over steps of inner locknut and secure with outer capnut. (Ensure braid is trapped between capnuts).

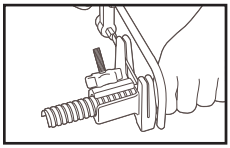


Tighten components as shown to recommended torque values.

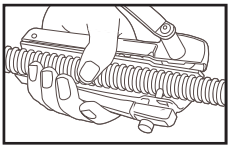
Metallic systems

Type S, SS, SP, SN & LFH-SP

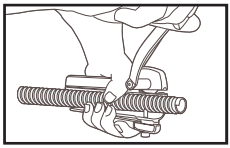
Cutting the conduit



Securely clamp the conduit - preferably with a cut-vice and use a fine tooth hacksaw, or



Use a Rotocut. (Sizes 20 & 25mm). Position and clamp conduit at position of required cut.

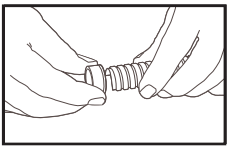


As handle is turned, gently squeeze onto conduit to cut through spiral, then remove and twist to separate.

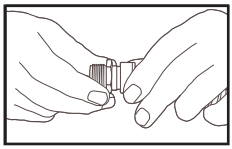
Tools required

- Fine-tooth hacksaw and cut-vice
- Rotocut
- Adjustable grips or spanners
- Utility knife

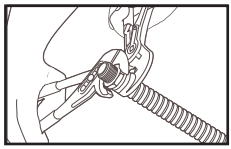
Fitting assembly - Types A, B, C & F fittings



Fit ferrule over end of conduit.



Screw fitting through ferrule into conduit.

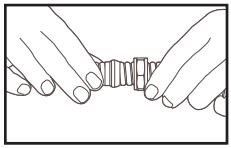


Tighten with grips.

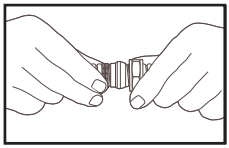
Hints and tips

If using Rotocut with covered conduit, use a utility knife to cut through the pvc sheath. A clean, square cut will ease subsequent fitting assembly.

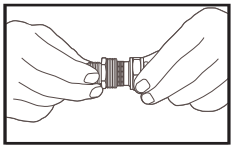
Fitting assembly - Type M fitting



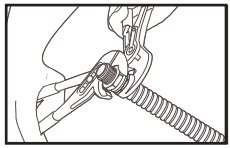
Apply capnut then sealing ring - chamfered end towards capnut.



Screw insert into end of conduit.



Offer up body and tighten capnut.

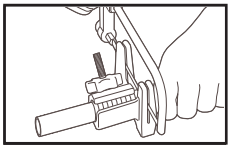


Install and position fittings into desired threaded entry, then fully tighten the fitting. System IP is achieved when blue seal is visible between

Metallic systems

Liquid tight fittings with liquid tight conduits

Cutting the conduit

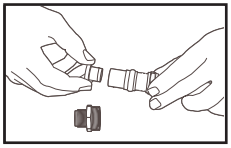


Securely clamp the conduit - preferably with a cut-vice - and use a fine tooth hacksaw.

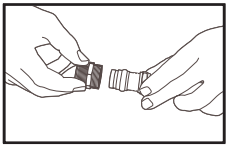
Tools required

- Fine-tooth hacksaw
- Cut-vice conduit vice
- Swingcut conduit cutter
- Adjustable grips or spanners

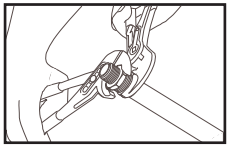
Fitting assembly - Type M fitting



Push capnut then seal over conduit, chamfered end towards capnut. Screw in end fitting.



Offer up body of fitting and hand tighten capnut.



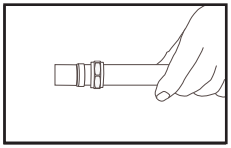
Install and position fittings into desired threaded entry, then fully tighten the fitting. **System IP is achieved when blue seal is visible between capnut & conduit.**

Hints and tips

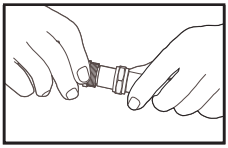
For M type fitting, ensure liquid tight seal is applied as shown, with tapered side towards capnut.

For fitting types A & B, seal is applied with chamfered side to fitting body.

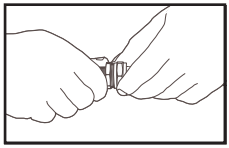
Fitting assembly - Type B fitting



Apply capnut and sealing ring over conduit, ensuring chamfered edge of seal is towards fitting body.

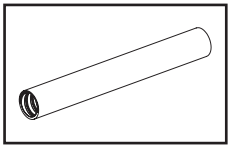


Fully screw the fitting into the conduit.

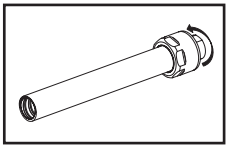


Screw the capnut onto the fitting and tighten with grips or spanners as above.

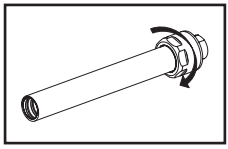
Fitting assembly - F&B Type SAM fitting



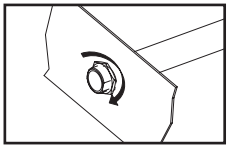
Cut conduit to required length.



Screw whole fitting in a clockwise direction onto the conduit, until hand tight.



While holding the flats of the thread, rotate the back nut clockwise until the seal is just visible between conduit and compression nut.

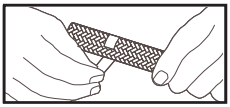


Install into threaded hole or knockout to the recommended torque values.

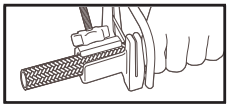
Metallic systems

Overbraided with Type SB, STC, SBB, SSBGS, SPB, SPTC & SPLHCB

Cutting the conduit



Apply insulating tape at the cutting point - 2 revolutions recommended.

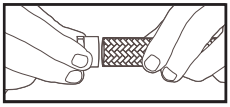


Securely clamp the conduit - preferably with a cut-vice. Cut through centre line of tape.

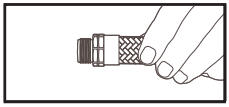
Tools required

- Fine-tooth hacksaw
- Cut-vice
- Tin snips
- Adjustable grips or spanners
- Insulating tape

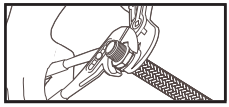
Fitting assembly - for conduit Type SB, STC, SPB, & SPTC



Remove tape, pinch braiding against inner conduit and apply ferrule.



Screw fitting body into conduit.



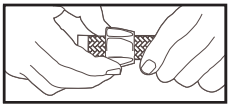
Tighten with grips or spanners to the recommended torque values as per fittings datasheet.

Hints and tips

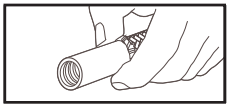
Use tin snips as required to trim the braiding after cutting with hacksaw. Take care when pulling back the outer braiding.

Due to the specialist nature of this conduit we offer a cutting and assembly service. Please ask for details.

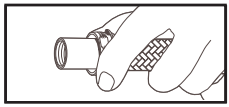
Fitting assembly - for conduit Type SPLHCB



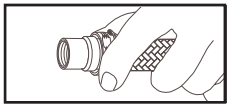
Before removing tape, place outer capnut onto conduit.



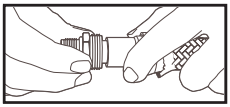
Remove tape and pull back braiding to expose approx. 50mm (2in) of conduit.



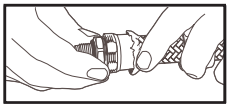
Apply inner nut to seat under braiding.



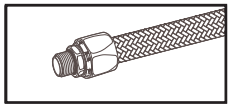
Apply sealing ring with chamfer towards cut end of conduit.



Screw body of fitting into conduit.



Screw inner nut onto fitting.



Screw outer nut onto inner nut ensuring braid is trapped securely and tighten with grips or spanners to the recommended torque values as per fittings datasheet.

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