# KIT/001

## Standard tools used for Acra KAM-500 system assembly

### Key Features
- Tool kits for Acra KAM-500 chassis, modules and cable connectors

### Applications
- Assembling Acra KAM-500 system

## Overview

ACD/KIT/001 consists of:

- ACD/TOL/002 – 24 AWG special thin body insertion tool
- ACD/TOL/005 – Handle for use with ACD/TOL/002 and ACD/TOL/006
- ACD/TOL/006 – Extraction tool for use with ACD/TOL/005
- ACD/TOL/004 – K154 positioner

ACM/KIT/001 consists of:

- ACC/TOL/002 – 3 x 0.5mm slotted screwdriver
- ACC/TOL/004 – 2 mm Allen key
- ACC/TOL/005 – 2.5 mm T-bar Allen key
- ACC/TOL/038 – 4 x 0.8 mm slotted screwdriver



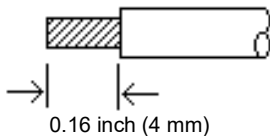Figure 1: Standard tools used for Acra KAM-500 system assembly

# Getting the most from KIT/001 tools

Follow these instructions to assemble the CON/KAD connector variations.

- The proper crimp tool (Daniels AFM8) and positioner must be used. The KIT/001 tools have been designed for use with this product. Substitutions of crimping equipment may result in connector failure at the assembly operation.

- After crimping a contact to a lead it is vital that the proper tool be used to assure seating the contact in the insulator in the proper position. Any substitution of insertion tools may result in over or under insertion of the contact which will damage the retention system of the insulator.

- The female (socket) side of the connector has been designed with a controlled float to allow for ease of mating. To avoid reducing this float or causing a splaying of the contacts, any unnecessary strain by clamping too close to the rear of the connector should be avoided.

- Connectors should be supported in a vice (or otherwise firmly supported) during both insertion and extraction of contacts. Failure to do say may result in insertion/extraction tips being broken.

Use of recommended tools and proper assembly techniques will pay dividends in reliability and reduced costs.

## Wire stripping

0.16 inch (4 mm)

Cut the wires to the length required and strip 0.16 inch (4 mm) of insulation from the end to be crimped. Check for cut or broken strands and frayed insulation.

## Contact crimping

1. Attach the ACD/TOL/004 positioner to the crimp tool (Daniels AFM8) and turn the adjustment wheel to the appropriate setting for the wire size as indicated on the label of the positioner.
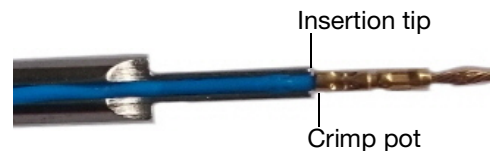
2. Insert the stripped end of the wire into the contact.

3. Insert the wire into the crimp tool, and crimp the contact to the wire by squeezing the handles firmly to insure a proper crimp (tool will not release if crimping is incomplete).

## Contact insertion

1. Place the insertion tip (ACD/TOL/002) in the insertion/extraction handle (ACD/TOL/005).

2. Place the wire along the grove in the insertion tip so that the tip butts up against the crimp pot as shown below.

Insertion tip

Crimp pot

3. Place the connector in a vice and using a firm, steady pressure, while keeping the tool perpendicular, push the contact into the cavity until the contact locks into place. The shoulder of the tool tip bottoms against the rear of the insulator, preventing over-insertion.

4. Repeat these steps for other wires to be populated.

## Contact extraction

When removing contacts, place the connector in the vice so that you are pushing the contacts from the opposite side they were inserted.

1. Place the extraction tip (ACD/TOL/006) in the insertion/extraction handle (ACD/TOL/005).

2. Insert the extraction tip into the socket until you feel the contact butt up against the shoulder of the pin contact.



3. While keeping the tool perpendicular, apply a firm steady pressure to push the contact and remove it from the connector.

4. Repeat these steps for other contacts to be removed.

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WARNING: It is recommended that pins are only inserted once into each pin location of the connector. A reinsertion of any pin into a location where a pin has been removed may result in a loose pin.

## Ordering information

| PART NUMBER | DESCRIPTION |
|---|---|
| ACD/KIT/001 | Tool kit for double-density connectors |
| ACM/KIT/001 | Tool kit for Acra KAM-500 chassis heatsinks, module retention, cable connectors and backshells |

By default an ACC/TOL/030 tool, which aids insertion/removal of modules, is included with each shipment. Additional items must be ordered separately; refer to Related products for options.

## Revision history

| REVISION | DIFFERENCES | STATUS |
|---|---|---|
| ACD/KIT/001 | First release | Recommended for new programs |
| ACM/KIT/001 | First release | Recommended for new programs |

## Related products

| MODULE | DETAILS |
|---|---|
| AFM8 M22520/2-01 | For Daniels crimp tool (M22520/2-01), see www.dmctools.com |

## Related documentation

| DOCUMENT | DETAILS |
|---|---|
| DOC/HBK/002 | Environmental Qualification Handbook |
| DOC/DBK/001 | Acra KAM-500 Databook |
| Handling precautions | Handling procedures for installing hardware modules (see the *Acra KAM-500 Databook*) |