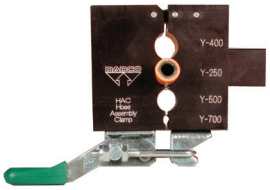
Constructing a Hose Assembly with Crimped Hose Adapters

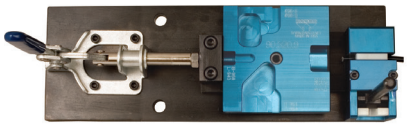
Hose Assembly Construction Tools

Hose Cutter and Clamps

90.320.7
Hose Cutter



90.320.6
Hose Assembly Clamp



90.320.9
Hose Assembly Clamp

Hose Assembly Construction

Hose Preparation

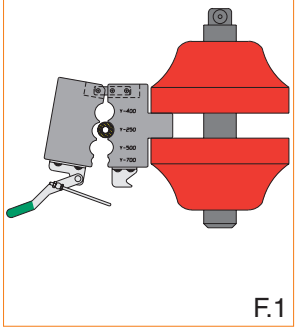
1. Measure hose.
2. Cut hose to appropriate length using the *90.320.7* Hose Cutter (a sharp knife can also be used). It is important to use a sharp edge, because a clean cut is necessary for proper sealing.
3. No burrs should be present if a clean cut was made. However, if burrs are present remove them with a sharp knife.

Hose Adapter Preparation

1. Inspect the hose adapter to ensure no damage occurred during shipment.
2. Ensure the swivel nut is properly crimped, and turns freely.

Crimped Hose Adapter Assembly

1. Secure the 90.320.6/9 Hose Assembly Clamp in a bench vise by its tab.
2. Insert the hose up through the 90.320.6/9, leaving enough hose extending up from the clamp to install the appropriate hose adapter (F.1).
3. Pull the lever to close the 90.320.6/9 (F.2).



F.1

DADCOFLEX® **90.400** *(Y-400)*, **& 90.500** *(Y-500)* **Only;**

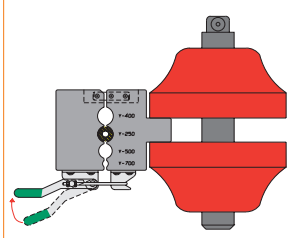
1. Lightly tap the hose adapter onto the hose with a rubber mallet. Ensure the hose adapter rests snug against the shoulder. The guideline on the outside of the socket indicates the shoulder (F.3).
2. Open the 90.320.6/9, and remove the hose assembly (hose and hose adapter).
3. The hose assembly is now ready to be crimped. See the hose chart below to determine appropriate crimp die and ring.

MINIFLEX® **90.700** *(Y-700)* **/ 90.705** *(Y-705)* **Only;**

For use with 90.504.943, 90.504.954 and 90.504.959 hose adapters. For *MINILink*® Systems refer to bulletin B11110B.

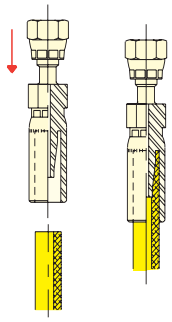
1. Screw the ferrule onto the hose. Ensure the hose rests snug against the shoulder.
2. Tap the nipple with a rubber mallet until the hose end bottoms onto the hose (F.4).
3. Open the 90.320.6/9, and remove the hose assembly.
4. The hose assembly is now ready to be crimped. See the hose information below to determine appropriate crimp die and ring.

NOTE: *90.700 (Y-700) hose assemblies with 90° hose adapters on each end must be crimped at the factory.*



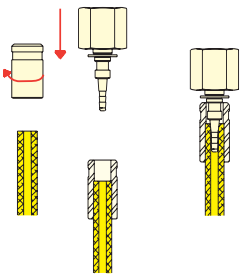
F.2

Permanent Hose Assembly



F.3

Permanent *MINIFLEX*® Hose Assembly



F.4

HOSE	CRIMP DIE	RING	CRIMP DIAMETER
90.400 *(Y-400)*	80C-P04 RED DIE	82C-R01 RING	14.22 - 14.73 *.560 - .580*
90.500 *(Y-500)*	80C-P03 GRAY DIE	82C-R01 RING	12.19 - 12.70 *.480 - .500*
90.700 *(Y-700)*	MINI-CRIMP - 90.710.8	NO RING REQUIRED	7.00 - 7.25 *.276 - .285*
90.705 *(Y-700)*	MINI-CRIMP - 90.710.8	NO RING REQUIRED	7.00 - 7.25 *.276 - .285*

See next page for crimping and crimp gage instructions

Constructing a Hose Assembly with Crimped Hose Adapters

Crimper and Dies

90.710.8
Mini-Crimp

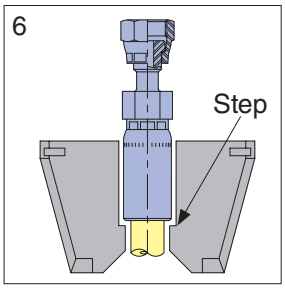
80C-P03
Gray Crimp Die

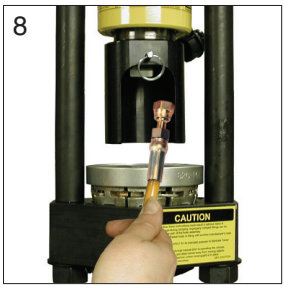
80C-P04
Red Crimp Die

90.720
Portable Crimping Unit

Crimping

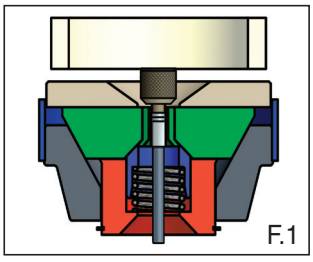
1. Before crimping, refer to the hose information on the previous page to determine the appropriate crimp die and ring. *(For crimping with DADCO's 90.710.8 see instructions below).*
2. Remove the pin from the pusher in the Karrykrimp Machine and move the pusher back.
3. Place crimp die into the base cavity of the crimper.
4. Place the die ring on top of the crimp die.
5. Position the hose and hose adapter into the crimp die from below.
6. Rest the bottom of the hose adapter on the step of the crimp die.
7. Actuate until the die ring contacts the crimper's base plate.
8. Release the pressure and remove the finished hose adapter.
9. Verify diameter of crimped section is correct using calipers and the chart on page one or DADCO's 90.320.CG.



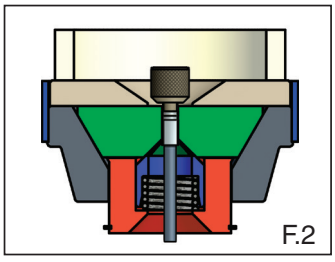


Crimping with 90.710.8 Mini-Crimp

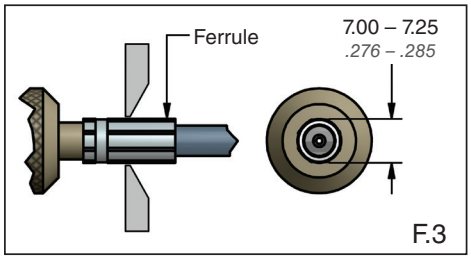
1. Place the Mini-Crimp 90.710.8 into the crimping machine. No die ring is required.
2. Insert the hose assembly from below through the center of the Mini-Crimp (F.1). For Instructions on constructing a *MINILink*® Hose Assembly request Bulletin No. B11110B.
3. Activate the hydraulic or pneumatic crimping machine to permanently crimp the hose adapter to the hose.
4. As the Mini-Crimp begins to close, position the hose adapter to ensure the entire length of the ferrule is crimped (F.2).
5. Remove the completed hose assembly from the Mini-Crimp 90.710.8.
6. Using calipers, measure the crimped ferrule diameter across the flats to verify it is within the crimp dimension range (F.3) or verify crimp diameter using DADCO's 90.320.CG.



Mini-Crimp prior to activating the hydraulic or pneumatic crimping machine.



Mini-Crimp "bottoming out" as the crimping machine permanently affixes the hose adapter to the hose.



Crimped ferrule diameter = See Page One

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Constructing a Hose Assembly with Crimped Hose Adapters

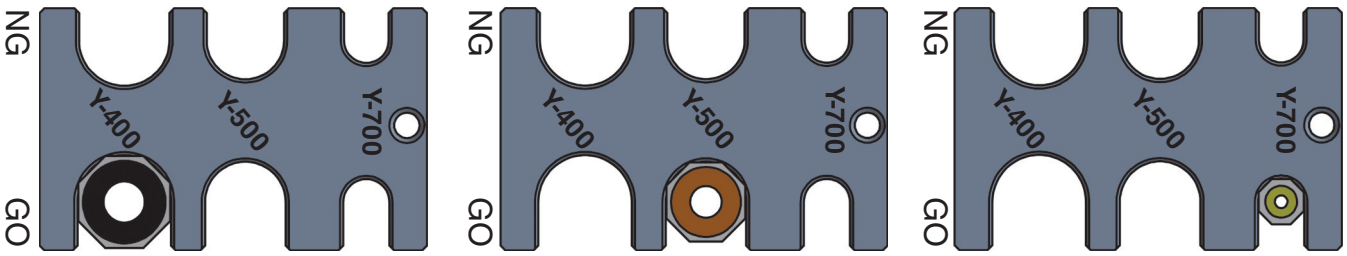
Hose Crimp Gage

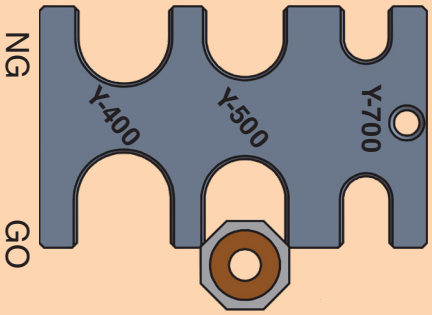
90.320.CG
Hose Crimp Gage

Hose Crimp Checking with DADCO 90.320.CG:

1. Position the flats of the formed crimp in the 90.320.CG Hose Crimp Gage.
2. Check two to three flat locations for conformance.
3. Place the crimp in the "GO" slot of the gage. If the hose adapter fits into the appropriate "GO" slot fitting: ***flats are within specification.***
4. Place the crimp in the "NG" slot of the gage. If the hose adapter does NOT fit into the appropriate "NG" slot fitting: ***flats are within specification.***
5. If the hose adapter easily fits into the "NG" slot, the hose adapter is overcrimped. ***See root causes below.***
6. If the hose adapter does NOT fit into the "GO" slot, the hose adapter is undercrimped. ***See root causes below.***

Crimp Within Specification:



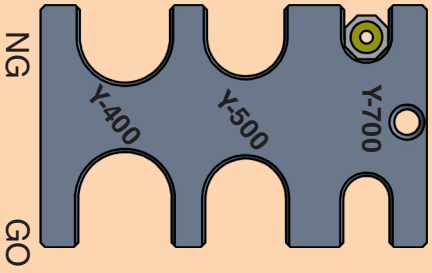


Undercrimped Indications:

- Hose adapter does not fit into "GO" slot.
- Crimp is too large - under crimped.
- Most common problem and will cause leaks.

Root Causes:

- Tool is worn.
- Incorrect pressing plate.
- Incorrect crimp die/tooling.
- Crimp press was not advanced enough - or stopped before it was complete.



Overcrimped Indications:

- Hose adapter fits into "NG" slot.
- Crimp is too small - over crimped.
- Possible on one set of flats, important to sample multiple sets of flats.

Root Causes:

- Tool is damaged or uneven.
- Undersized part.
- Incorrect crimp die and or tooling.