



FT1380*electronic*

CRIMP MACHINE OPERATOR'S MANUAL

Danfoss Electronic FT1380e Crimp Machine Operator's Manual

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Safety Instructions

WARNING

Failure to follow Danfoss process and product instructions and limitations could lead to premature hose assembly failures, resulting in property damage, serious injury or death.

Danfoss fitting tolerances are engineered to match Danfoss hose tolerances. The use of Danfoss fittings on hose supplied by other manufacturers and/or the use of Danfoss hose fittings supplied by other manufacturers, may result in the production of unreliable and unsafe hose assemblies and is neither recommended nor authorized by Danfoss.

Read and understand the operator's manual before attempting to operate any equipment.

Danfoss hereby disclaims any obligation or liability (including incidental and consequential damages) arising from breach of contract, warranty, or tort (under negligence or strict liability theories) should Danfoss Aeroquip or Danfoss Weatherhead hose, fittings or assembly equipment be used with the hose, fittings or assembly equipment supplied by another manufacturer, or in the event that product instructions for each specified hose assembly are not followed.

SAFETY INSTRUCTIONS

1. Prevent Unauthorized operation. Do not permit anyone to operate this equipment unless they have read and thoroughly understand this manual.
2. Wear safety glasses. Do not wear loose clothing while operating the machine.
3. Avoid pinch points. Do not rest your hand on the crimp ring. Keep your hands clear of all moving parts. Do not allow anyone, other than the operator, close to the equipment while it is in operation.

4. Maintain dies with care. Dies used in the FT1380e crimp machine are sintered powdered metal, offering the best combination of strength and wear resistance for long life. Sintered powdered metal dies are generally brittle and care should be taken to avoid any sharp impact. Never strike a die with a hardened instrument.

5. Use only specified Danfoss products. Make hose assemblies using only Danfoss hose assemblies specified for this assembly equipment.

6. Verify correct crimp diameters. Check and verify correct crimp diameters of all fittings after crimping. Do not put any hose assemblies into service if the crimp diameters do not meet Danfoss crimp specifications.

7. Make sure all dies are completely in place and the cage is positioned properly on the pressure plate.

8. Do not over pressurize. Do not exceed the 10,000 psi hydraulic pressure supplied to the machine. This setting is preset at the factory and should not require adjustment.

Note: All components used to connect the pump and crimp cylinder must meet the criteria set forth in the Material Handling Institute Specification #IJ100 for hydraulic jacking applications.

9. Die change. Do not insert/remove dies while the power is on.

10. Secure the equipment to a stable work surface. Prior to operation, secure the crimp machine to a stable work surface to prevent the equipment from tipping.

11. Unplug the power supply when not in use.

12. Keep work area clean. Cluttered areas and benches invite accidents.

Specifications

ELECTRICAL REQUIREMENTS

FT1380e-115 & FT1380e-115CSA:

115-Volt AC single phase (50/60) Hz circuit with a minimum of 20 amps

FT1380e-230 & FT1380e-230CSA:

208 to 230-Volt AC single phase (50/60) Hz circuit with a minimum of 15 amps

CRIMP MACHINE DIMENSIONS

Width	16.062 inches
Depth	25.75 inches
Height	29.875 inches
Weight	258 pounds

PRODUCTION CAPACITY

Danfoss braided and spiral hydraulic hoses which use TTC/Z or 4S/6S series hose ends through -20 size.

SETUP AND INSTALLATION

1. Mount your Danfoss FT1380e crimp machine onto a workbench that will support at least 300 pounds. Secure the unit using the holes provided in the corners of the crimp machine base.
2. Remove the plug from the hydraulic reservoir vent port and replace it with the vent cap that is supplied with the unit.

CAUTION: Failure to do so will cause cavitation and damage to the pumping mechanism. Hand tighten the vent cap.

3. Never use an extension cord, always plug directly into the power outlet.

CAUTION: Provide electrical service with a dedicated circuit (per the crimp machine electrical requirements) to eliminate the possibility of a low-voltage situation.

CRIMP MACHINE PART NUMBERS:

FT1380e-115 Base machine with 115v pump

FT1380e-115CSA Base machine with 115v pump, UL/CSA approved

FT1380e-230 Base machine with 230v pump

FT1380e-230CSA Base machine with 230v pump, UL/CSA approved

CRIMP MACHINE AND TOOLING PACKAGE PART NUMBERS:

FT1380e-115-9 Contains FT1380e crimper, 115v pump, and ET4020TP-0003 tooling package

FT1380e-115-9CSA Contains FT1380e crimper, 115v pump, and ET4020TP-0003 tooling package, UL/CSA approved

UPGRADE PACKAGE PART NUMBERS:

FT1380e-115-UP 115v Electronic Upgrade Package
(requires shipment of current machine to manufacturer)

FT1380e-230-UP 230v Electronic Upgrade Package
(requires shipment of current machine to manufacturer)

FT1380e-115-UPCSA 115v Electronic Upgrade Package, UL/CSA approved
(requires shipment of current machine to manufacturer)

FT1380e-230-UPCSA 230v Electronic Upgrade Package, UL/CSA approved
(requires shipment of current machine to manufacturer)

DIE CAGE REPAIR KITS

Die cage repair kits for FT1380-200-size, FT1380-275-size.
Part number..... FT1380-2-9

OPTIONAL FITTING BACKSTOP

Part number..... FT1380-4

TTC/Z SERIES FITTING LOCATORS

Part number..... FT1330-XL

4S SERIES FITTING LOCATORS

(cannot be used in combination with FT1330-XL locators)
Part number..... FT1380-XL

USB DRIVE

Part number..... FT1380e-1-7

STYLUS

Part number..... FT1380e-1-8

WIPING CLOTH

Part number..... FT1380e-1-9

DIE CAGES

Part numbers:	
FT1380-275-M070	FT1380-275-M090
FT1380-275-M120	FT1380-200-M150
FT1380-200-M180	FT1380-200-M210
FT1380-200-M240	FT1381-200-M280
FT1380-200-M320	FT1380-200-M370
FT1380-200-M420	FT1382-200-M465
FT1382-275-M520	



FT1380e CONTROL PANEL TUTORIAL

The electronic FT1380e machine comes with an integrated touch screen to control the machine functions. This section provides instruction for how to use the touch screen controller.

ICON QUICK REFERENCE

Below is a quick reference guide for the icons that are shown when using the FT1380e touch screen.

- | | | | |
|---|---|---|-----------------------|
|  | Help including owner's manual, icon quick reference and tutorial |  | Maintenance |
|  | Product Library |  | Admin Login |
|  | Favorites Menu |  | Calculator |
|  | Rename Favorited Spec |  | Page Up |
|  | Delete Favorited Spec |  | Page Down |
|  | Save Favorite |  | Scroll Up |
|  | Load Selected Spec |  | Scroll Down |
|  | Production Screen |  | Move Spec Up |
|  | Search |  | Move Spec Down |

Product Library



On the **Product Library Screen**, you can see the complete list of FT1380e crimp specs.

PRODUCT LIBRARY

0 CALIBRATION TTC/Z SERIES FT1380-M240

1 1503-10 100R5 FT1380-R5-10

2 1503-12 100R5 FT1380-R5-12

3 1503-16 100R5 FT1380-R5-16

4 1503-20 100R5 FT1380-R5-20

5 1503-04 100R5 FT1380-R5-04

6 1503-05 100R5 FT1380-R5-05

7 1503-06 100R5 FT1380-R5-06

8 1503-08 100R5 FT1380-R5-08

9 1531-10 BARREL FIELD FT1380-R5-10

10 1531-10 CTC (FW1380) FT1380-M240

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🔑

The screen displays available Crimp Spec options. To find your spec, select the search icon 🔍. Once the keyboard appears, type in the hose series name on the keyboard, then hit **ENT**. It will scroll to the first entry for the searched value. Scroll up or down using the arrow icons to locate the desired crimp spec.

Favorites Menu



Commonly crimped hoses should be saved as **Favorites**. If an offset has been entered for the crimp spec, it will be stored with the **Favorites** record.

FAVORITES

0 GH781-04 TTC/Z SERIES FT1380-M150

1 GH781-06 TTC/Z SERIES FT1380-M210

2 GH781-08 TTC/Z SERIES FT1380-M240

3 GH781-10 TTC/Z SERIES FT1381-M280

4 GH781-12 TTC/Z SERIES FT1380-M320

5 GH781-16 TTC/Z SERIES FT1380-M370

6

7

8

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ABC

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Hose Series

Fitting Style

Hose Size

Tooling

Target Setting

Crimp Diameter

Crimp Dia Tol

Crimp Position

Crimp Pos Tol

Ovality

0.000

0.000

0

0.000

0.000

0

0.000

To find your spec, select the search icon 🔍. Once the keyboard appears, type in the hose series name on the keyboard, then hit ENT. It will scroll to the first entry for the searched value. Scroll up or down using the arrow icons to locate the desired crimp spec.

Production Screen



The crimping procedure is performed from the **Production Screen**.

PRODUCTION

GH781-08 TTC/Z SERIES FT1380-M240



Crimp Diameter

0.967

Crimp Position

0.000

Crimp Pos Tol

0.030

Ovality

0.008

Crimp Min

0.954

Crimp Max

0.980

Hose Series

GH781

Fitting Style

TTC/Z Series

Position

1245

Retract

0

Hose Size

8

Tooling

FT1380-M240

Target

59

Offset

☐



The **Production Screen** displays all the information required for crimping and includes color assembly photos for core hose products allowing for easy assembly verification.

Maintenance



The **Maintenance Screen** displays crimp machine calibration information, revision level, and a crimp counter. Access to user privilege settings can also be found on this screen. This screen is only accessible when logged in as **Admin**.

MAINTENANCE

Admin

Logout

SENSOR

MAX

4095

=

1255

Raw Input

3885

=

1190

MIN

0

=

0

SCALED

Revision

2.002 HMI

2.001 PLC

Crimp Counter

0

Last Known Position

0

Maintenance Offset

34



PRIVILEGES



If the **CALIBRATION** spec is loaded, a calculator icon will appear. Select the calculator to enter calibration measurements following the calibration procedure steps outlined in this manual.

Revision level for the HMI and PLC can be found under “Revision.”

To search for a crimp spec

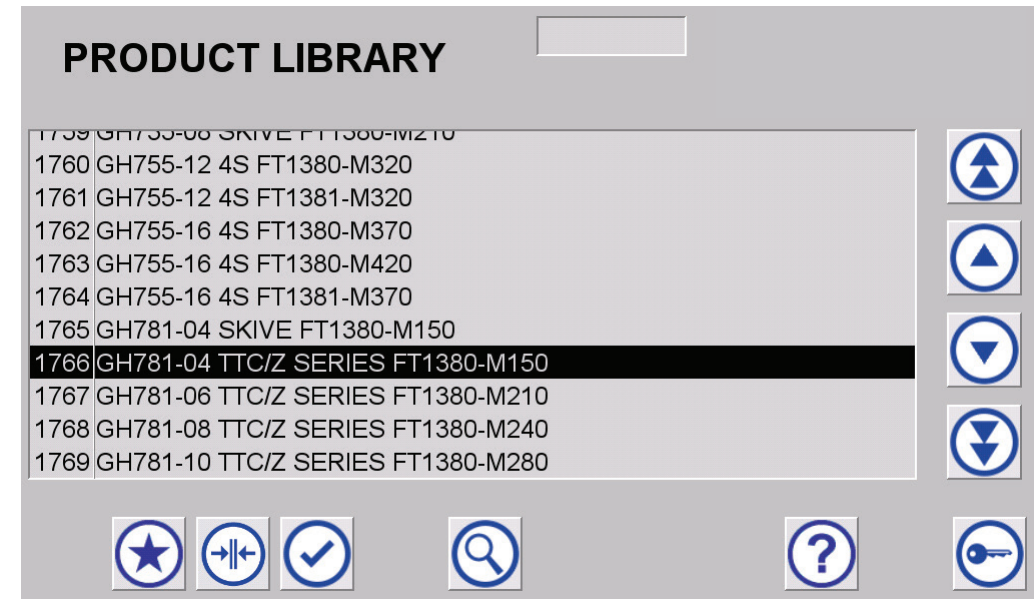


- A** Click Search icon 
- B** Type in hose name, hit **ENT**

- Navigate to the **Product Library Screen** by selecting the **Product Library icon** .
- Click the **Search** icon  on the bottom of the screen.

Once the keyboard appears, type in the hose series name on the keyboard, then hit **ENT**.

Note: It will scroll to the first entry for the searched value. Scroll up or down using the arrow icons to locate the desired crimp spec.



Loading a hose assembly crimp spec into the machine

PRODUCT LIBRARY

1765	GH781-04 SKIVE FT1380-M150	
1766	GH781-04 TTC/Z SERIES FT1380-M150	
1767	GH781-06 TTC/Z SERIES FT1380-M210	
1768	GH781-08 TTC/Z SERIES FT1380-M240	A
1769	GH781-10 TTC/Z SERIES FT1380-M280	
1770	GH781-10 TTC/Z SERIES FT1381-M280	
1771	GH781-12 SKIVE FT1380-M280	
1772	GH781-12 SKIVE FT1381-M280	
1773	GH781-12 TTC/Z SERIES FT1380-M320	
1774	GH781-12 TTC/Z SERIES FT1381-M320	
1775	GH781-16 TTC/Z SERIES FT1380-M370	

B

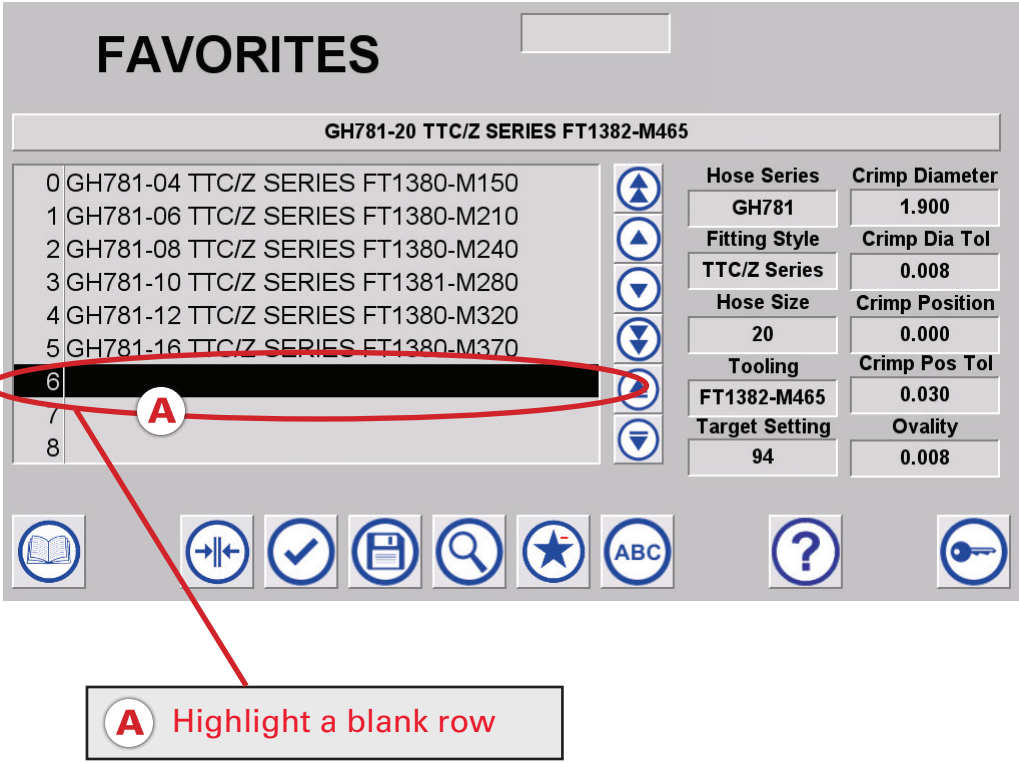
A Select required spec

B Hit Load icon

-Spec is now able to be crimped or saved as a favorite

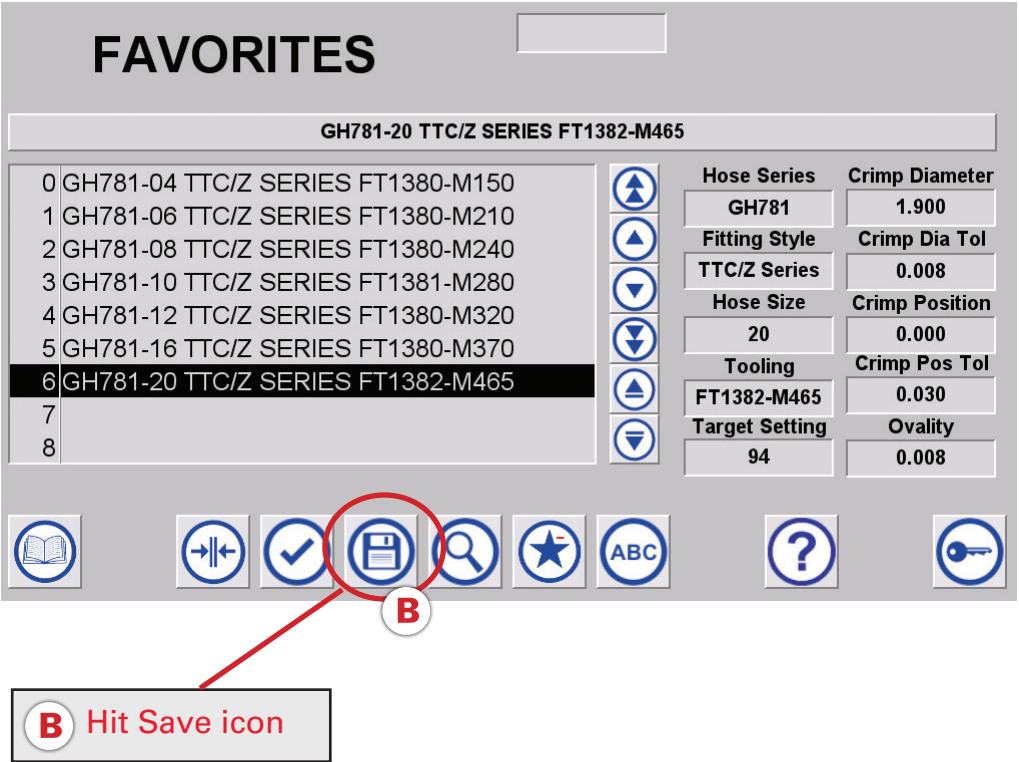
To load a crimp spec into the machine, go to the **Product Library** screen and select the relevant spec by either searching or scrolling. Hit the **Load** icon . Once the **Load** icon is selected, you are able to crimp with this spec via the production screen or navigate to the favorites screen to save the crimp spec as a favorite.

Saving a hose as a favorite



To save a hose as a favorite:

- Select the required spec and then load into machine by selecting the **Load** icon
 - Navigate to **favorites** menu
 - Highlight a blank row and hit the **Save** icon
- The spec is now saved as a favorite.

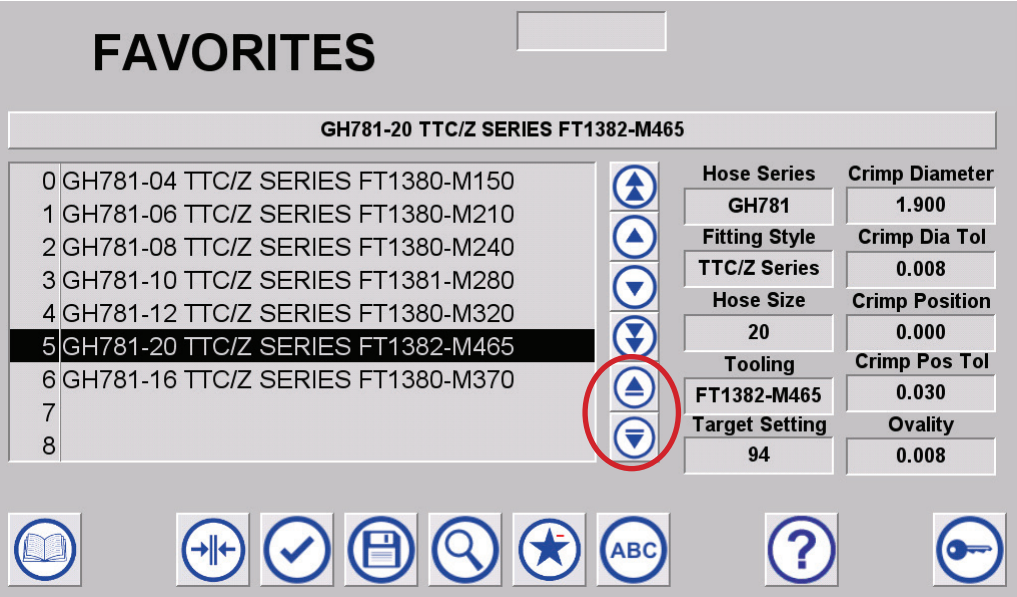


Note: If a location is not selected when the save icon is selected, the spec will save in the first available blank favorite row.

Note: If privileges are enabled, you can move a spec up and down by selecting the move spec up and move spec down arrows.

Moving a favorite record

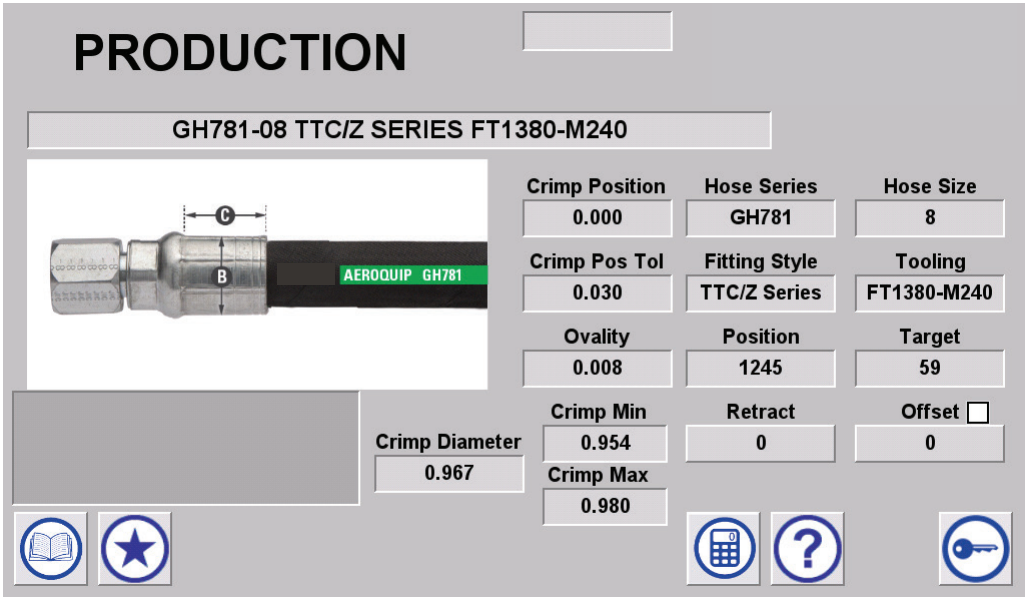
If privileges are enabled, you can select a favorite row and then move the selected spec up or down in the favorites list by selecting the  **move spec up** and  **move spec down** arrows.



Crimping from product library menu

Load a hose into the machine by selecting the **Load** icon  and navigate to production screen. Crimp spec details are shown. Verify the proper hose, fitting, and tooling selections and begin the crimping process by pressing the crimp switch on the machine. After crimping, measure the achieved crimp diameter to ensure a safe and reliable hose assembly.

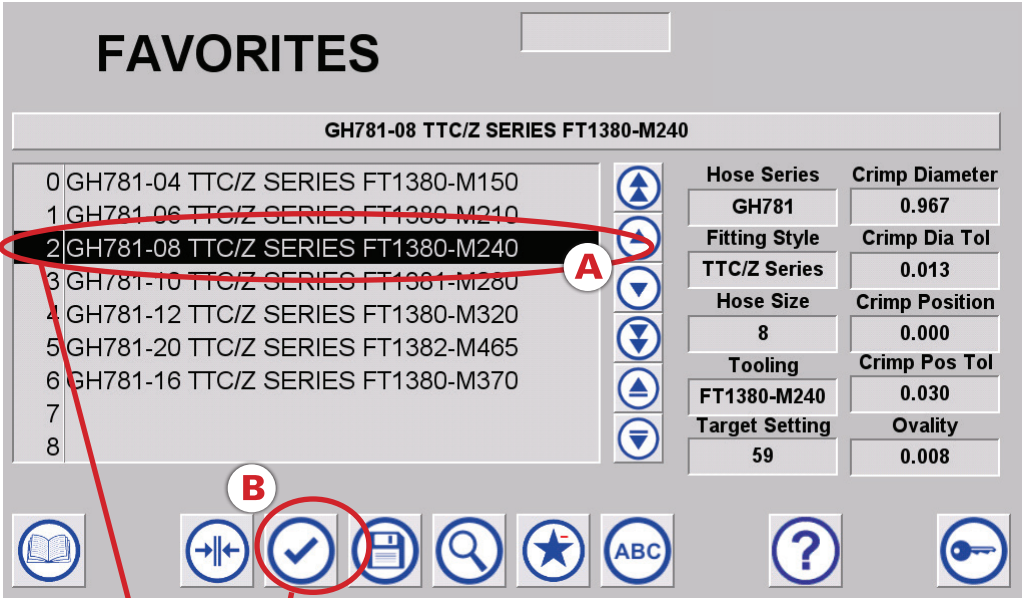
*Warning – Follow all instructions in this operator’s manual and do not permit anyone to operate this equipment unless they are properly trained and have read and thoroughly understand this manual.



* Offsets can be entered, but will not be saved for future use. An offset cannot be saved back to “Product Library.” Offsets can only be saved to “favorites.”

Crimping from Favorites Menu

Navigate to the **Favorites** menu . Highlight desired crimp spec and hit the **Load** icon  to load the favorited spec into the machine.

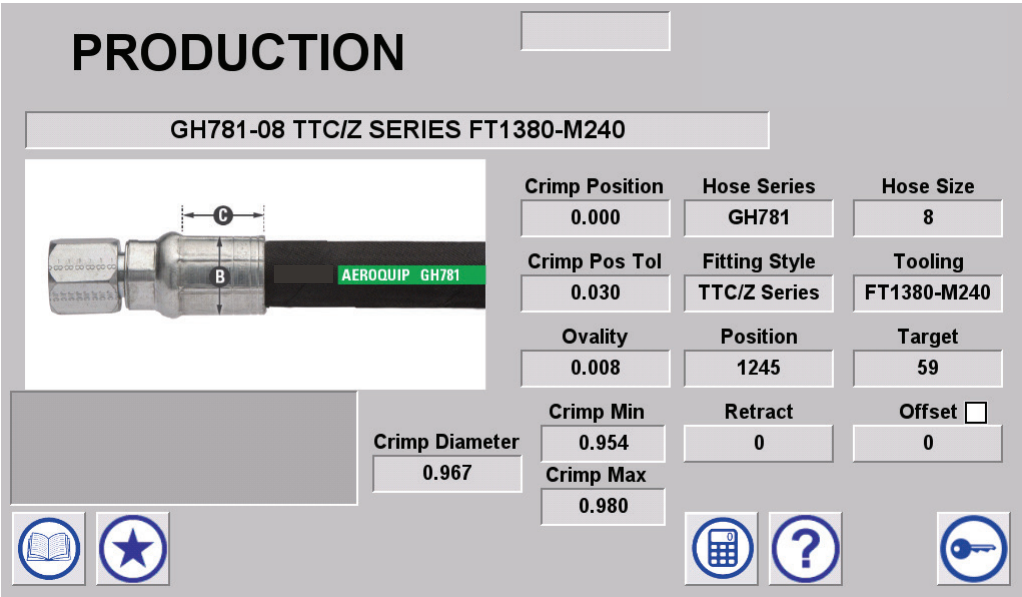


- Navigate to favorites menu
- A** Highlight desired spec
- B** Hit Load icon to load favorited spec into machine

Navigate to the **production** screen . Crimp Spec details are shown. Verify the proper hose, fitting, and tooling selections and begin the crimping process by pressing the crimp switch on the machine.

***Warning –** Follow all instructions in this operator’s manual and do not permit anyone to operate this equipment unless they are properly trained and have read and thoroughly understand this manual.

After crimping, measure the achieved crimp diameter to ensure a safe and reliable hose assembly. Enter the measured crimp diameter using the **calculator** . The offset will automatically be calculated and saved with the favorites record.



Renaming Favorites

To rename a favorite, select a spec to rename.
Then press the **Rename Favorite** icon .

FAVORITES

GH781-20 TTC/Z SERIES FT1382-M465

0 GH781-04 TTC/Z SERIES FT1380-M150	↑	Hose Series	Crimp Diameter
1 GH781-06 TTC/Z SERIES FT1380-M210	↑	GH781	1.900
2 GH781-08 TTC/Z SERIES FT1380-M240	↓	Fitting Style	Crimp Dia Tol
3 GH781-10 TTC/Z SERIES FT1381-M280	↓	TTC/Z Series	0.008
4 GH781-12 TTC/Z SERIES FT1380-M320	↓	Hose Size	Crimp Position
5 GH781-20 TTC/Z SERIES FT1382-M465	↓	20	0.000
6 GH781-16 TTC/Z SERIES FT1380-M370	↑	Tooling	Crimp Pos Tol
7	↑	FT1382-M465	0.030
8	↓	Target Setting	Ovality
		94	0.008



A

Select spec to be renamed

B

Press Rename Favorite icon

FAVORITE 1 - GH781-20

1	2	3	4	5	6	7	8	9	0	'	-	<<
Q	W	E	R	T	Y	U	I	O	P	{	}	
A	S	D	F	G	H	J	K	L	:	"		ENT
~	Z	X	C	V	B	N	M	<	>	?		

SpaceESC

C

To save name
hit ENT

The current name is populated. Use the keyboard to change the name as desired. Use the back button to erase the characters in the current name. To save the new name, hit **ENT**.

FAVORITES

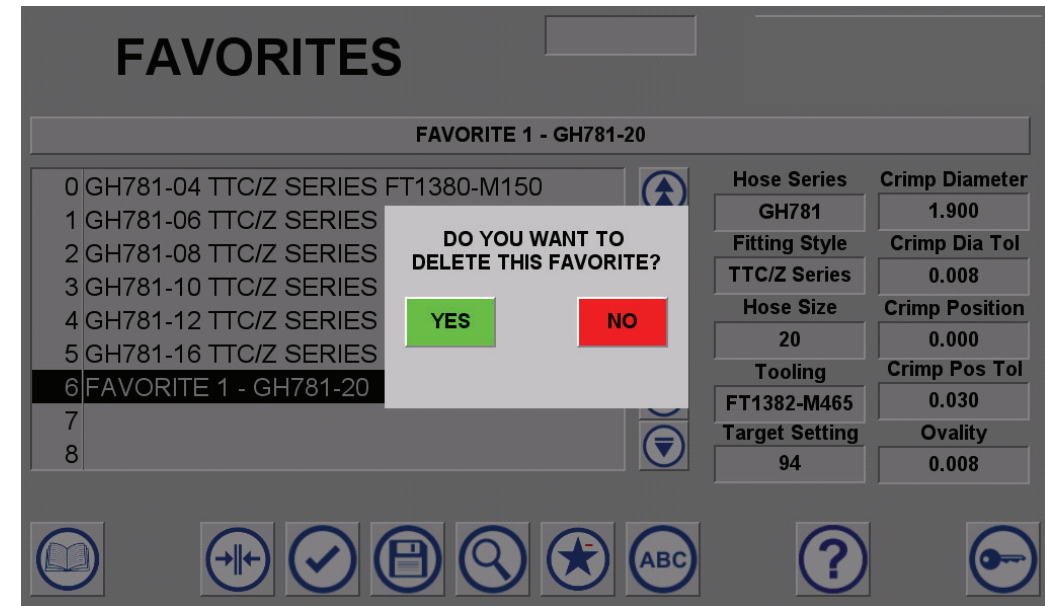
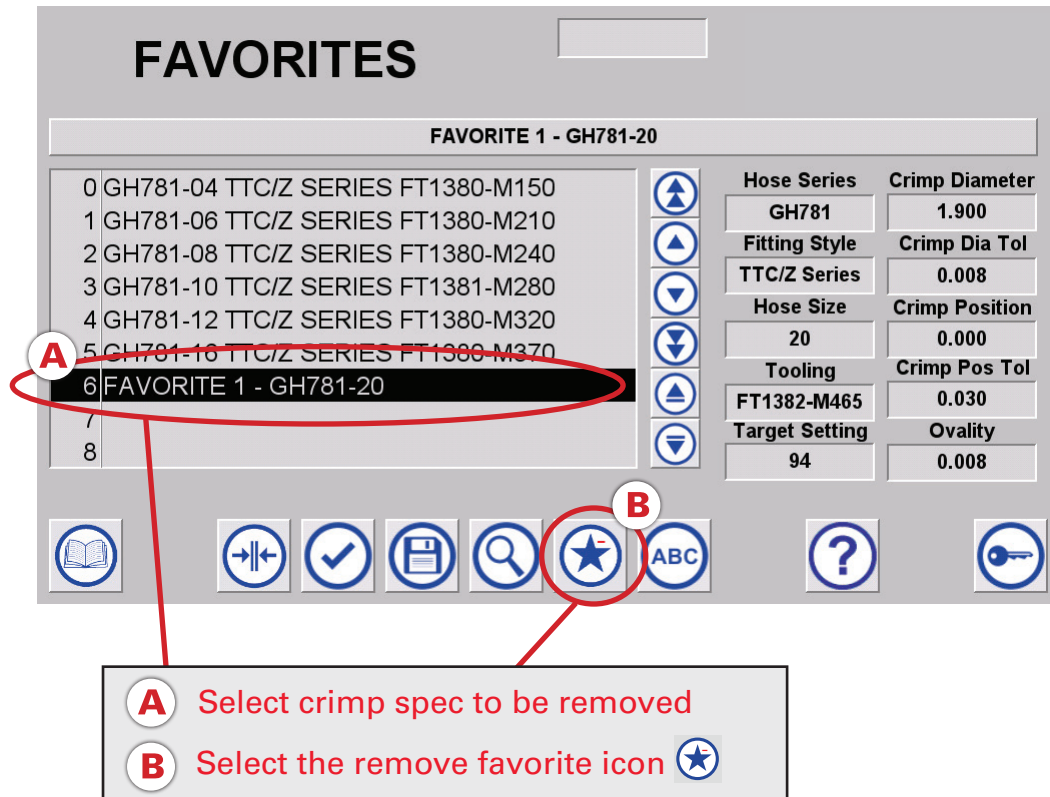
FAVORITE 1 - GH781-20

0 GH781-04 TTC/Z SERIES FT1380-M150	↑	Hose Series	Crimp Diameter
1 GH781-06 TTC/Z SERIES FT1380-M210	↑	GH781	1.900
2 GH781-08 TTC/Z SERIES FT1380-M240	↓	Fitting Style	Crimp Dia Tol
3 GH781-10 TTC/Z SERIES FT1381-M280	↓	TTC/Z Series	0.008
4 GH781-12 TTC/Z SERIES FT1380-M320	↓	Hose Size	Crimp Position
5 FAVORITE 1 - GH781-20	↓	20	0.000
6 GH781-16 TTC/Z SERIES FT1380-M370	↑	Tooling	Crimp Pos Tol
7	↑	FT1382-M465	0.030
8	↓	Target Setting	Ovality
		94	0.008



Removing a Favorite

A favorite record may be removed by highlighting it and selecting the remove favorite icon .



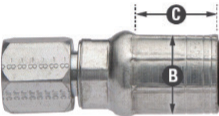
You will be prompted to confirm that you do wish to remove the Favorite.

Changing crimp offsets via calculator

After crimping, measure the crimp diameter across each of the flats of the crimped fitting. Press the **Calculator Icon** .

PRODUCTION

GH781-08 TTC/Z SERIES FT1380-M240



AEROQUIP GH781

Crimp Position	Hose Series	Hose Size
0.000	GH781	8
Crimp Pos Tol	Fitting Style	Tooling
0.030	TTC/Z Series	FT1380-M240
Ovality	Position	Target
0.008	1245	59
Crimp Min	Retract	Offset ☐
0.954	0	0
Crimp Max		
0.980		

Crimp Diameter

0.967

A Press Calculator

The calculator window will open. Enter the four measurements and select the **Calculate** button. One or more values must be entered for the calculation to be performed. The offset value is automatically calculated based on the average of the measurements entered and stored with the Favorites record, if the spec was accessed from Favorites.

Note: The calculated offset may be adjusted and overwritten by selecting the Offset button and entering a new value.

Measured "A"

0.000

Measured "B"

0.000

Measured "C"

0.000

Measured "D"

0.000

Calculate

CLEAR

THE RESULT OF THIS EQUATION WILL AUTOMATICALLY LOAD AND SAVE THE ADDITIONAL OFFSET INTO PROGRAM

FT1380-M240

Crimp Position	Hose Series	Hose Size
0.000	GH781	8
Crimp Pos Tol	Fitting Style	Tooling
0.030	TTC/Z Series	FT1380-M240
Ovality	Position	Target
0.008	1245	59
Crimp Min	Retract	Offset ☐
0.954	0	0
Crimp Max		
0.980		

Crimp Diameter

0.967

B Enter the 4 Measured Diameters in Measured "A", "B", "C", and "D"

C Press "Calculate"

Measured "A"

0.000

Measured "B"

0.969

Measured "C"

0.000

Calculate

THE RESULT OF THIS EQUATION WILL AUTOMATICALLY LOAD AND SAVE THE ADDITIONAL OFFSET INTO PROGRAM

7

8

9

ESC

4

5

6

<<

1

2

3

0

C

ENT

FT1380-M240

Crimp Position	Hose Series	Hose Size
0.000	GH781	8
Crimp Pos Tol	Fitting Style	Tooling
0.030	TTC/Z Series	FT1380-M240
Ovality	Position	Target
0.008	1245	59
Crimp Min	Retract	Offset ☐
0.954	0	0
Crimp Max		
0.980		

Crimp Diameter

0.967

Changing crimp offsets via calculator (continued)

If further adjustment is needed after another crimp, select the **Calculator** icon  and enter the four measurements and select Calculate.

X

Measured "A"

0.969

Measured "B"

0.968

Measured "C"

0.967

Measured "D"

0.969

Calculate

CLEAR

THE RESULT OF THIS EQUATION WILL
AUTOMATICALLY LOAD AND SAVE THE
ADDITIONAL OFFSET INTO PROGRAM

FT1380-M240

Crimp Position

0.000

Crimp Pos Tol

0.030

Ovality

0.008

Crimp Min

0.954

Crimp Max

0.980

Hose Series

GH781

Fitting Style

TTC/Z Series

Position

1245

Retract

0

Hose Size

8

Tooling

FT1380-M240

Target

59

Offset

☐

-2

Crimp Diameter

0.967

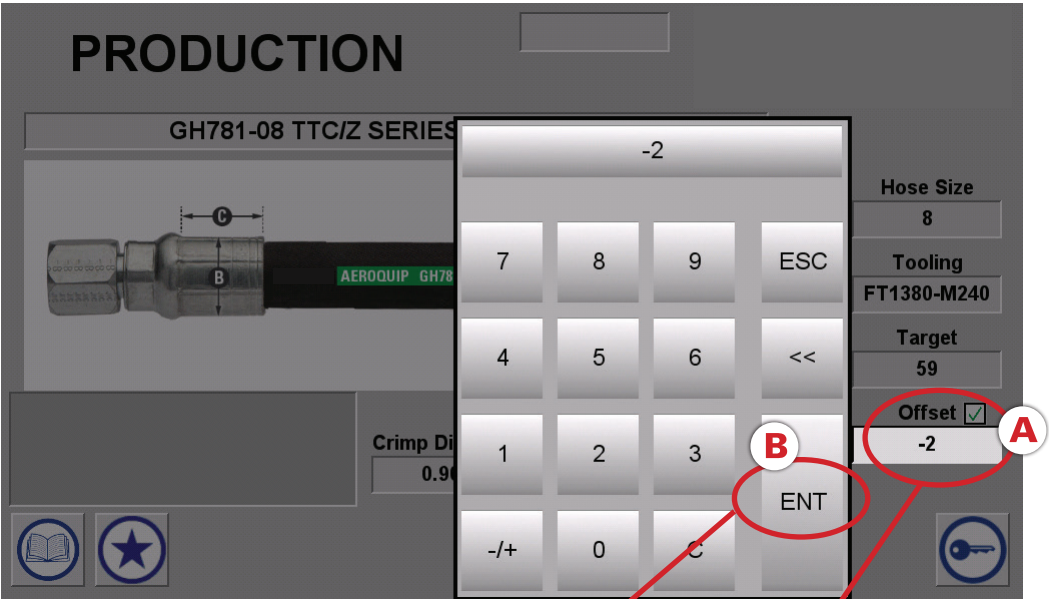




Note: The additional offset is calculated and added to original offset value.

Changing crimp offset manually

To change the crimp spec offset manually, press the “offset” field. Enter the desired offset using the keypad. Hit the **ENT** button to save and close window.



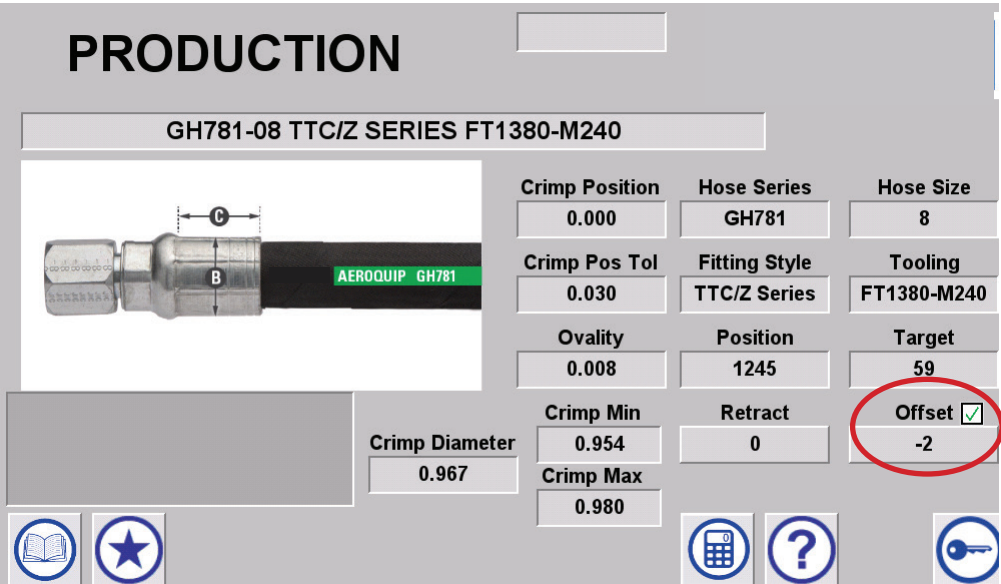
- A** Press “Offset” field
Type in desired offset
- B** Hit ENT to save and close the window

Note: This function overwrites the offsets determined via the calculator

Offset Verification

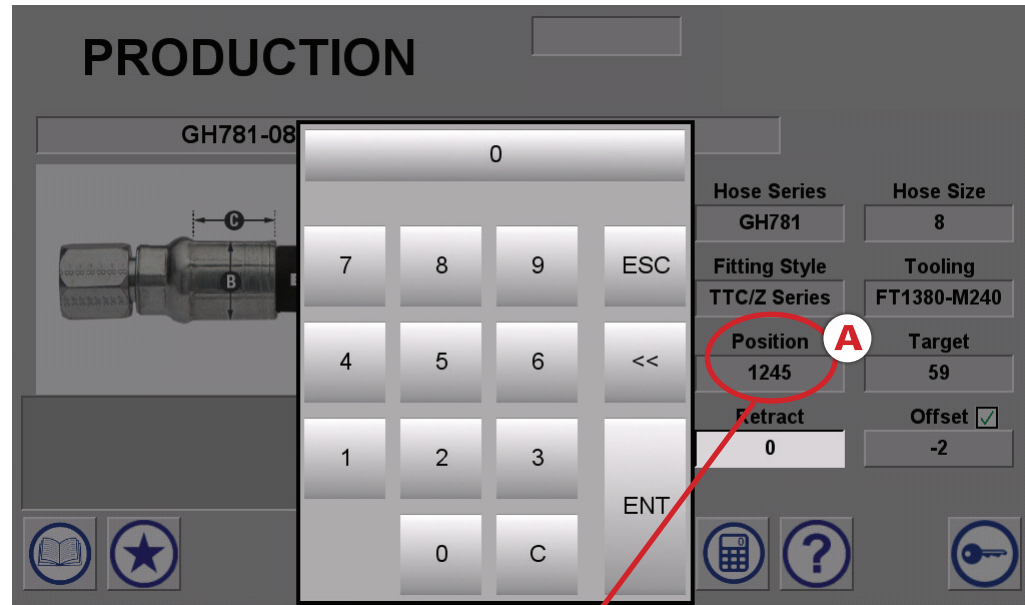
Once the offset has been verified, select the box next to Offset and a green checkmark will appear. This indicates that the offset has been verified.

Note - If unable to select the checkbox, the Administrator has not enabled this Offset Verification privilege for the Non-Admin user.



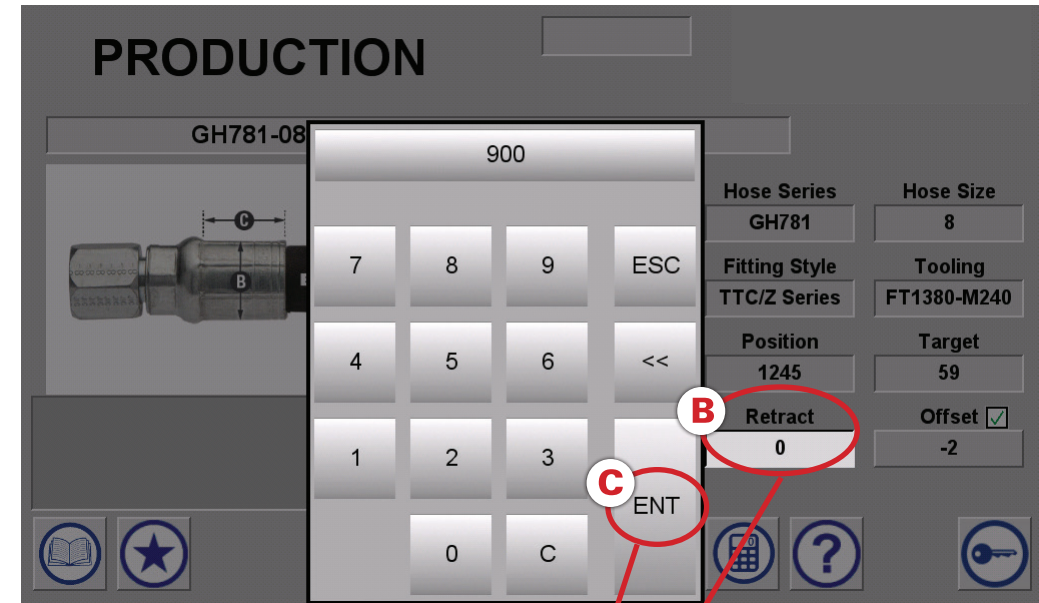
Setting variable retract position

To set the Variable Retract Position, jog the crimper to desired retract position. Then, note value in “**Position**” field, which is shown for reference.



Jog the crimper to the desired retract position

A Note value in “Position” field



B Press “Retract” field

C Type desired value, hit ENT

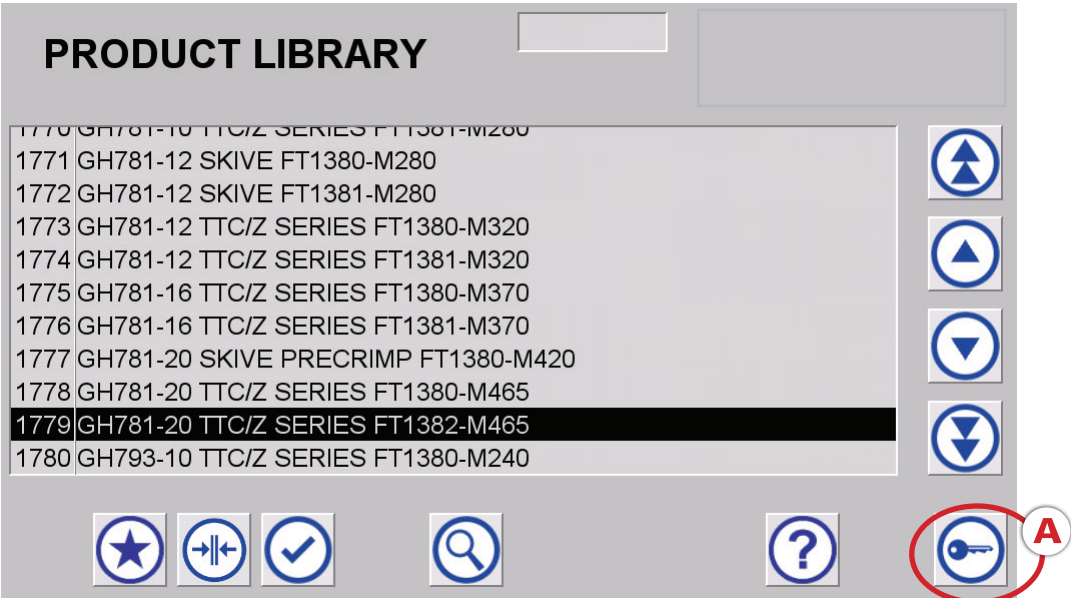
The crimper will now retract to the desired position.

Note: The retract position can be safely entered as values 0 - 1000. The retract position value is “global” and all crimps will retract to this position until the value is changed.

Note: Entering a retract value that is smaller than the target setting will cause the machine not to retract. The retract must then be performed manually by using the switch.

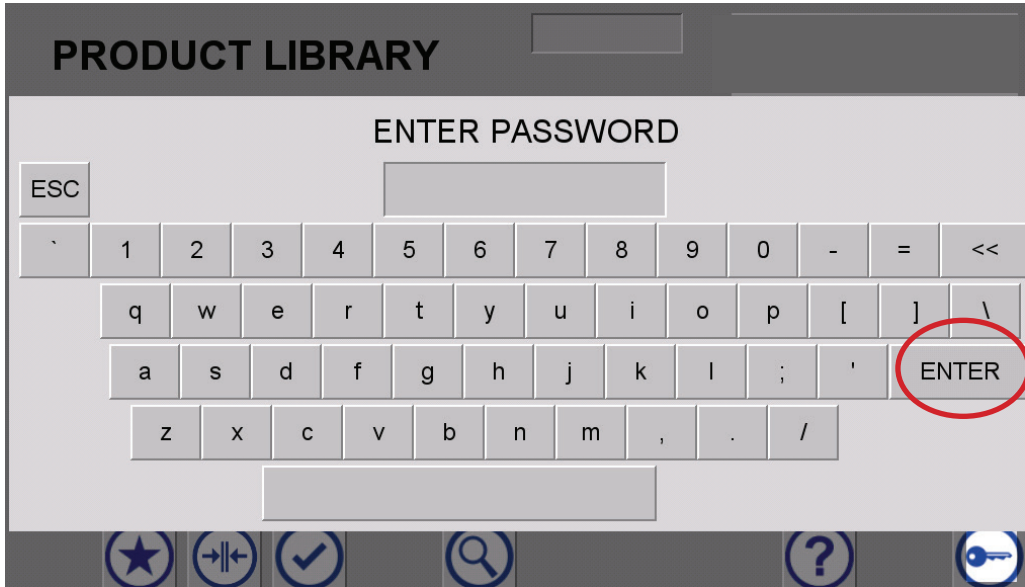
Logging in as Admin

To log in as **Admin**, press on **Admin Login** icon .



A Press Admin Login icon
• Keyboard pops up

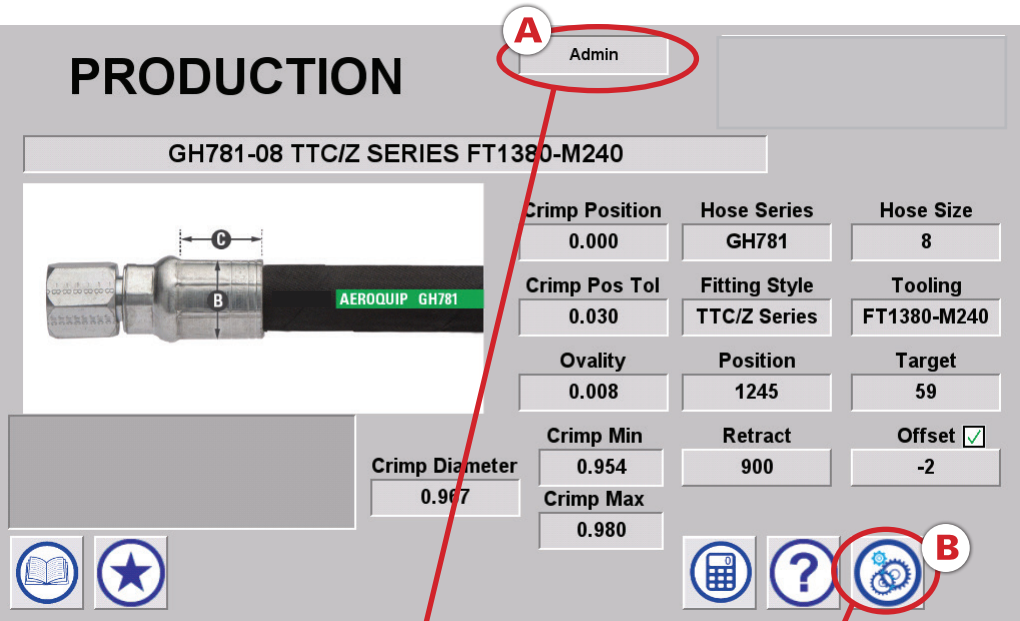
Enter the admin password provided and then press “**ENTER**” to log in as admin.



Logging in as Admin (continued)

When logged in as Admin, “Admin” displays at the top of the screen and the **maintenance** icon  becomes visible.

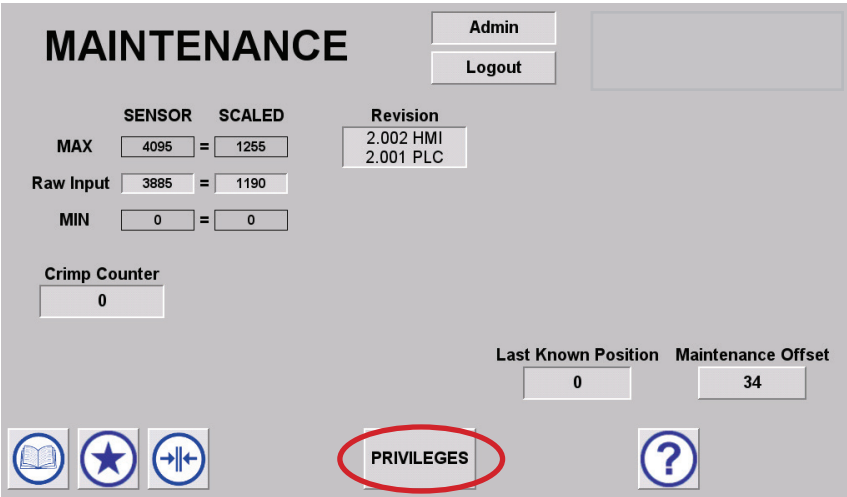
Note: The Admin account logs out after the specified period of time. This can be found and updated on the Privileges screen. The privileges screen can be accessed by selecting the Privileges button while on the maintenance screen.



A “Admin” displays at the top of the screen

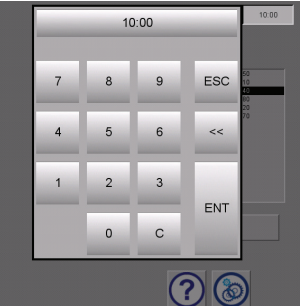
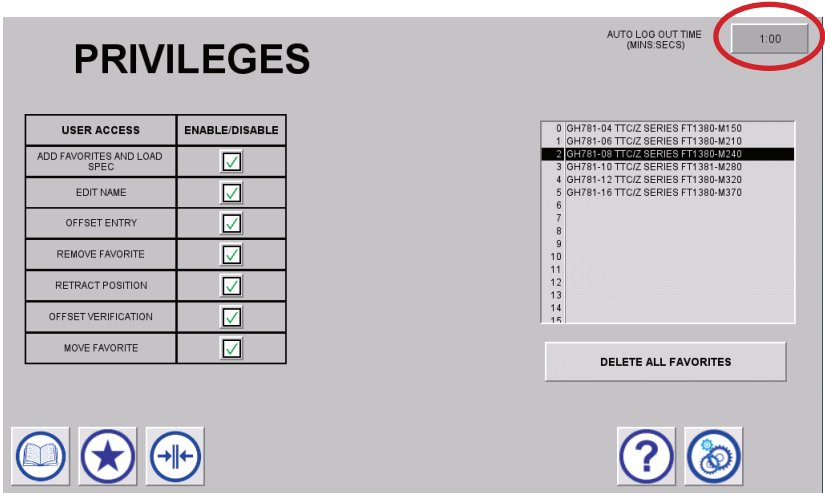
B Maintenance icon becomes visible

Note: Admin account logs out automatically after specified time period set on the privileges screen



Admin Auto Log Out

There is a Logout button for the Admin on the Maintenance screen. In case the Admin forgets to log out, there is an auto logout feature. This setting can be found and changed by the Admin on the Privileges screen. To change the value, select the button and enter the desired value in minutes.



Loading custom crimp specs



To load custom crimp specs, log in as admin and navigate to the Favorites menu. Select a blank row and load it into the machine. All 10 fields to the right of the Favorites menu can now be edited by pressing on them.

After entering your custom values, edit the favorite name by selecting the Rename Favorite icon . Then press the Save icon  to save the Favorite.

Caution: While logged in as admin, it is possible to edit attributes (such as crimp diameter) of other Danfoss crimp specs saved as favorites.

Machine Calibration

To check calibration or to recalibrate the machine,

- Navigate to the Product Library.
- Select CALIBRATION spec and load it into the machine.
- Navigate to the production screen and crimp a TTC/Z series -8 fitting with an M240 die.
- Log in as admin.

While on the Maintenance screen,

- Select the calculator icon. The calculator window will open.
- Enter the **FOUR MEASUREMENTS** and select the Calculate button.

The offset value is automatically calculated and stored.

Note: The calculated offset may be adjusted and overwritten by selecting the Offset button and entering a new value. Note - Valid values are between 0.900 and 1.100. Do not include decimal points when entering. Examples: 0900, 1100

Note: The calculator icon only appears when the CALIBRATION spec is loaded.

Any additional offset is calculated and added to original offset value. Re-check an additional -8TTC/Z series fitting and repeat as required.

MAINTENANCE

Admin

Logout

SENSOR

MAX

4095

=

1255

SCALED

Raw Input

3884

=

1190

MIN

0

=

0

Revision

2.002 HMI

2.001 PLC

Crimp Counter

0

Last Known Position

0

Maintenance Offset

34

PRIVILEGES

MAINTENANCE

Admin

Logout

SENSOR

MAX

4095

=

1255

SCALED

Raw Input

3885

=

1190

MIN

0

=

0

Revision

2.002 HMI

2.001 PLC

Crimp Counter

0

Measured "A"

0.000

Measured "B"

0.000

Measured "C"

0.000

Measured "D"

0.000

Calculate

Additional Offset

0

"Calculate" WILL ADD THE "Additional Offset" TO THE "Maintenance Offset" VALUE

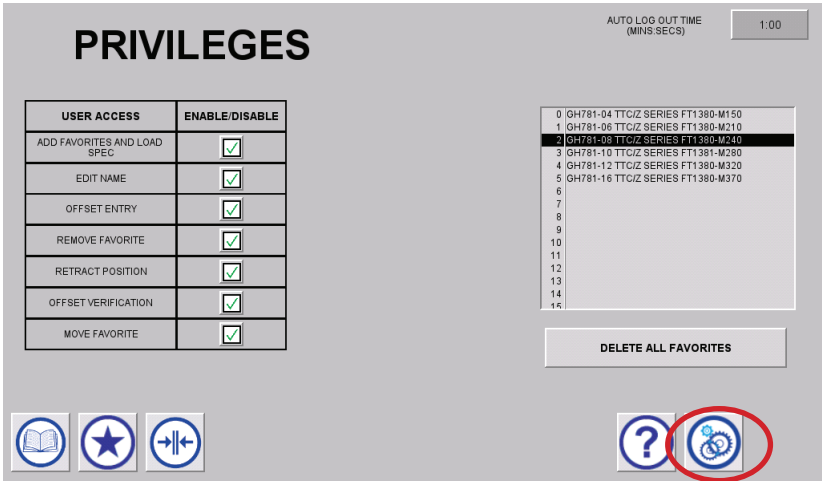
Last Known Position

0

Maintenance Offset

34

PRIVILEGES



You must be logged in as **Admin** to set privileges.

- First select the maintenance icon
- Then select the Privileges button.

The admin can then set the privileges that the non-Admin user can access. Privileges that can be granted is a follows:

Add Favorite/Load Crimp Spec

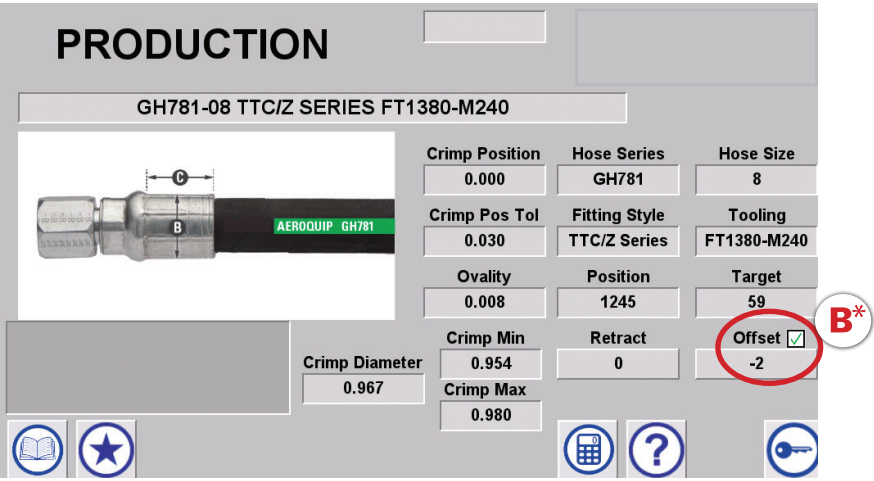
When enabled, allows common user to add a favorite and to load a crimp spec from the Favorites screen

Edit Name

When enabled, allows common user to edit the names of Favorites

Offset Entry

When enabled, allows common user to enter measured crimp diameters and to calculate the offset



Remove Favorite

When enabled, allows common user to remove a favorite

Retract Position

When enabled, allows common user to set the crimp machine retract position

Offset Verification

When enabled, allows common user to verify an offset by selecting the box next to the offset

* (See **B** image above)

Move Favorite

When enabled, allows common user to move and reorder favorites

Note - By default the common user will have access to all Privileges. The admin must disable access for privileges that the common user should not be able to access.

Updating software

The crimp machine will come loaded with the most current version of the software. When an update is available, it will be announced. To get to the current version of the software, visit Danfosscrimpersupport.com and download the software to the USB drive that was provided. When the machine is shipped, the USB drive, stylus, and wiping cloth are placed in a cardboard box that is taped to the inside of the white pusher on the machine. Make sure that all files are removed from the drive before loading the new version of the software to the drive. It is important that the file structure is not changed.

To load the new software to the crimp machine:

- Turn on the machine.
- Locate the USB port, which is located on the right side of the machine. Remove the port cover and insert the drive once the crimper has booted up. The software installation will run automatically and will take just a few minutes.

During this process, a menu will appear with several options: **BACKUP, RESTORE, or EXIT.**

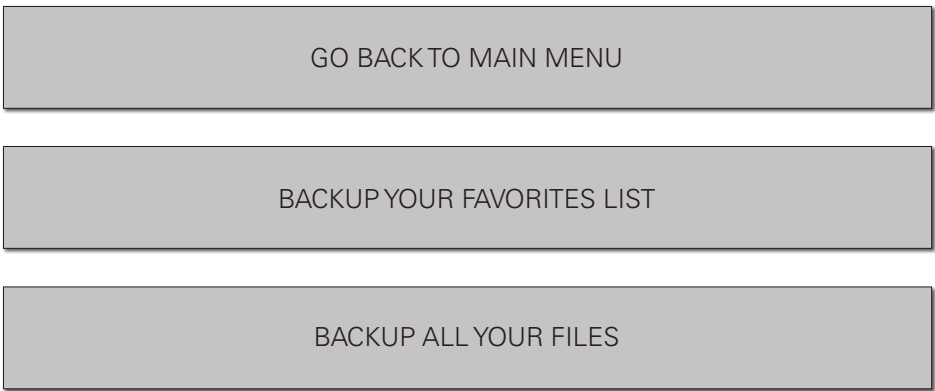
Danfoss FT1380E USB UTILITY - MAIN MENU



Selecting **BACKUP** brings up a menu to save your entire current program or to only backup your favorites list.

EXIT closes the USB utility and returns to the crimper program.

Danfoss FT1380E USB UTILITY - BACKUP MENU



Updating software (cont.)

The **RESTORE** option brings up a menu to load the new software, to load your current saved program, or to load your favorites list.

Danfoss FT1380E USB UTILITY - RESTORE MENU



To restore your favorites after a software update:

- First backup all files.
- Then backup the favorites list.
- Next, restore all factory crimper files.

Then restore the favorites list.

Select **Exit** to close the utility and use the crimper.

To install new updates without restoring favorites:

- First backup all files.
- Next, restore all factory crimper files.

Select **Exit** to close the utility and use the crimper.

If there is a problem with the new program use the USB utility to restore all your files to their previous state.

*Note – offsets will need to be re-entered and verified.

PLC Updates

In the event that a PLC update is required, a micro-SD memory card (SD or SDHC) with a capacity of 128 MB to 32 GB is required.

To perform update:

1. With the machine turned off, open the electrical box and locate the PLC.
2. Open the drawer on the left side of the PLC and insert the micro-SD card.
3. Close the SD card drawer.
4. Turn on the machine. Updates will install automatically.
5. After updates complete, turn off the machine.
6. Remove the micro-SD card from the PLC and close the electrical box.
7. Proceed with HMI update using the provided USB drive as described above.



Crimping Procedures

Loading and Unloading Die Cages

To load the die cage, press and hold the **RETRACT** switch (figure 1) until the crimp ring reaches the “full retract” position and stops. The die cage may be inserted or removed in this position (figure 2). The FT1380e crimp machine will automatically retract when it has reached the target setting (this is when crimp is complete).



Figure 1



Figure 2

WARNING: Maintain clear distance from all moving parts.

Refer to the current Danfoss PowerSource Crimp Spec tool for complete and detailed crimp specification information for each hose and fitting style.

1. Retract the crimp ring by depressing the retract switch until the crimp ring is fully retracted. Select the proper die cage as shown in the PowerSource Crimp Spec tool. Use the high efficiency grease provided to grease the outside of each of the die segments and then slide the die cage into the cage holder slots.
2. Using the touch screen, navigate to the appropriate crimp spec production screen via selection from the Product Library or the Favorites menu.
3. Position the fitting within the crimp cage aligning the scribe line to the top of the dies.
4. To crimp the fitting, depress the **CRIMP** switch. The crimp ring will rise until the fitting is fully crimped. It will then stop and begin to retract, signifying that the crimp is complete. Remove your finger from the **CRIMP** switch. The crimp ring will automatically retract.
5. Verify correct crimp diameter.
Reminder: Full retraction is required for changing die cages.

Maintenance Procedures

Maintenance Intervals:

Die Cage Lubrication

- Every 50 crimps: Relube sliding surfaces of dies
- Every 500 crimps: Remove old grease and relube
- Every 1000 crimps: Die cage maintenance

Crimp Ring Maintenance

- Every 500 crimps Remove old grease and relube
- Every 2000 crimps Remove old grease, inspect for wear or damage and relube if okay

Use high efficiency PTFE grease (part number T-400-G for 4 oz tube, FF91455 for 16 oz can)

Die Cage Maintenance Procedures

1. Lubricate the die cage. For maximum service, FT1380 die cages require lubrication at 50-crimp intervals with high efficiency PTFE grease. FF91455 is a 16 ounce container that will provide sufficient lubricant for about 10,000 crimps.

Periodically remove grease residue that has built up on the sides of the dies and in the crimp ring during the crimping process. Residue becomes contaminated with metal and plating chips and airborne contaminants, which can cause premature wear of the dies and crimp ring. It should carefully be removed without mixing it with newly applied grease.

2. Die cage maintenance should be performed at 1000- crimp intervals or every six months, whichever occurs first. Die cages should be free of grease and debris and inspected for worn or damaged components.

- a. The sliding surface of the dies should appear smooth with no apparent galling. Galled dies must be replaced. Individual dies in a cage can be replaced without replacing all eight dies.
- b. Replace springs that show any sign of damage or collapse such as those which are shorter than the other springs.
- c. The spring plate should appear smooth with no apparent galling. Galled spring plates must be replaced.
- d. Inspect remaining components, and replace those that are badly worn.

Reassemble components, and liberally apply high efficiency PTFE grease to the die surface which slides along the spring plate. Torque the die cage bolts to 50 in. -lbs. Ensure that all dies slide in and out freely.

Machine Maintenance Procedures

1. Sliding surfaces must be kept free of dirt and other abrasive materials.
2. All exposed black metal surfaces should be coated occasionally with a light film of oil to prevent corrosion.
3. Periodically check the oil level in the fluid reservoir of the hydraulic power unit. Maintain the oil level according to the indicator on top of the reservoir. Add hydraulic oil as needed.

Note: Completely retract the crimp ring when checking the oil level.

Troubleshooting Tips

Remember: The electric motor only runs during the crimping process. The motor energizes when the crimp switch is pressed and de-energizes when the crimp switch is released or when the crimp cycle is completed. While retracting, the hydraulic dump valve is energized. When the valve is energized, oil flow is directed from the pump to the cylinder. When the valve is de-energized, oil flows from the cylinder back to the reservoir.

Symptom	Corrective Action
Pump will not start	• Make sure the power cord is plugged in to correct voltage outlet. Have electrician confirm correct voltage is available at outlet. • Make sure switch on pump is in the 'ON' position. Pump may need service.
Sporadic operation	• Check oil level. • Bleed entire hydraulic system to remove trapped air.
Noisy operation	• Air in system....Check oil level. • Bleed entire hydraulic system to remove trapped air. • Clean pump filter screen.
Pump Runs but Does Not Build Pressure or Pump Oil	• Check oil level. • Clean pump filter screen. • Internal Leakage...Pump needs services at authorized repair facility.
Crimp diameters change	• Verify the correct hose/fitting combination. • Verify the correct die cage. • Repair or replace the damaged die cage. • Tighten loose transducer and brackets, and then recalibrate them if necessary. • Tighten any loose bolts or screws. • Lubricate the die cage per the maintenance procedures. • Lubricate the tie rod bushings per the maintenance procedures.

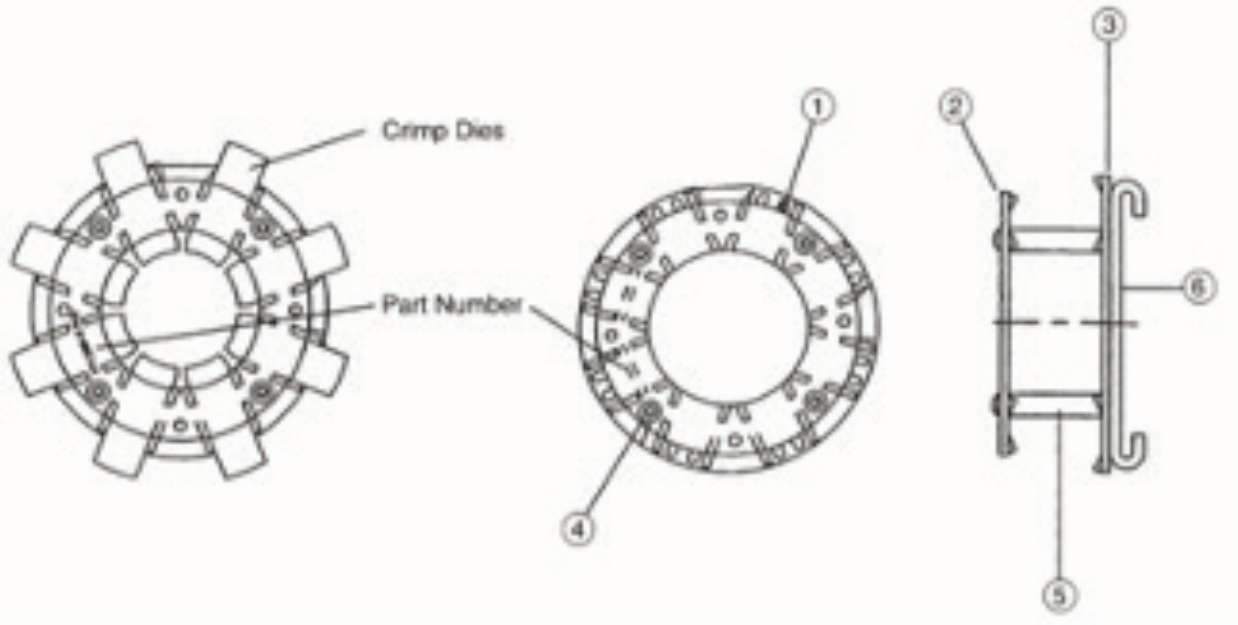
If the symptom appears to be solely pump or cylinder related, refer to the Repair Parts Sheets.
Any electrical checks must be performed by a qualified electrician.

Crimp Machine Components

Part Number	Description	Qty
FT1380e-5-1	Pump/Valve Assembly, 115v	1
FT1380e-5-2	Pump/Valve Assembly, 230v	1
FT1380-3-2	Cylinder, Enerpac	1
FT1380e-3-1-115	FT1380e Controls Assembly, 115v	1
FT1380e-3-1-230	FT1380e Controls Assembly, 230v	1
FT1380e-3-1-115CSA	FT1380e Controls Assembly, 115v CSA	1
FT1380e-3-1-230CSA	FT1380e Controls Assembly, 230v CSA	1
FT1380e-1-2	Control Box Bracket	1
FT1380e-1-1	Light, 24v	1
FK8687GGG0320	Hose Assembly	1
FF2032T0606S	Adapter, 90 Degree	1
FF2093T0606S	Adapter, 45 Degree	1
FT1380-3-5	Transducer, 3" Stroke	1
FT1380-3-9	Frame Weldment	1
FT1380-3-12	Pressure Plate Casting	1
FT1380-3-13	Crimp Ring	1
FT1380-3-14	Tie Rod	2
FT1380-3-15	Top Block	1
FT1380-3-16	Transducer Mounting Bracket	1
FT1380-3-17	Transducer Rod Bracket	1
222003-6-24S	3/8"-16 x 1.50" SHCS	2

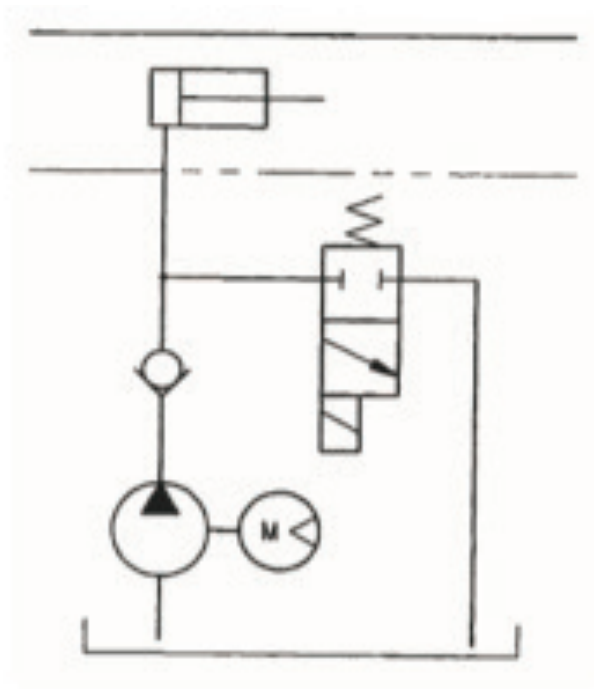
Part Number	Description	Qty
FF9339-04-12S	1/4"-20 x 0.75" SHCS	4
FT1380-3-21	Nut, 1-1/4"-12 Grade 8	2
FT1380-3-22	1/4-20 x 2.50" SHCS	2
FT1380-3-24	1/4-20 x 0.38" Stainless SHCS	4
FT1380-3-25	1/2-13 x 0.75" SHCS	2
FT1380-3-26	#8-32 x 0.38" SHCS	8
FT1380-3-27	#6-32 x 0.50" SHCS	2
FF9230-0501S	Washer	4
FT1330-3-64	Caution Decal	1
FT1380e-1-4	LomarTech Support Decal	1
FT1380e-1-5	Serial Number Decal, 115v	1
FT1380e-1-12	Serial Number Decal, 230v	1
FT1380e-1-10	Serial Number Decal, 115v CSA	1
FT1380e-1-11	Serial Number Decal, 230v CSA	1
FT1380e-1-6	FT1380e Name Decal	1
FF91455	Lubricant	1
FT1380-3-34	Bushing, Bronze	2

Die Cage Components



Detail Number	FT1380-2-9 Bill of Material	FT1380-2-9A Bill of Material	FT1381-2-9 Bill of Material	Description	Qty Req'd
1	FT1330-2-9-21	FT1330-2-9-2	FT1330-2-9-21	Die Spring	8 or 16*
2	FT1380-2-9-3	FT1380-2-9-2	FT1381-2-9-3	Front Plate	1
3	FT1330-2-9-13	FT1330-2-9-3	FT1330-2-9-13	Spring Plate	1
4	FT1330-2-9-55	FT1330-2-9-5	FT1381-2-9-55	Cap Screw	4
5	FT1330-2-9-66	FT1330-2-6-6	FT1381-2-9-66	Spacers	4
6	FT1380-2-9-1	FT1380-2-9-1	FT1380-2-9-1	Back Plate	1

*The FT1380-200-NO. (FT1380-2-9) and FT1381-200-NO (FT1391-2-9) require 16 springs and the FT1380-201-NO. (FT1380-2-9A) requires 8 springs.



SEQUENCE

1. Pump on – Cylinder advances
2. Valve energized – Cylinder retracts
3. Pump and valve de-energized – Cylinder holds position

Frequently Asked Questions

Question 1: Why won't the machine retract?

Answer – Check the global retract position. The retract position can be safely entered on the production screen as values 0 - 1200. The retract position value is “global” and all crimps will retract to this position until the value is changed. Entering a retract value that is smaller than the target setting will cause the machine not to retract. The retract must then be performed manually by using the switch.

Question 2: Why are the calculated offsets not being saved with my crimp spec?

Answer – For offsets to be saved with the crimp spec record, you must crimp from Favorites. If you crimp from Favorites, select the calculator icon, enter your measurements, and then select Calculate, the offset will be calculated and stored with the Favorite crimp spec record. If you are crimping with a spec from the product library, offsets will not be saved. No changes can be made to the product library.

