

ENGINEERING
TOMORROW



Operator's Manual

Danfoss ET5040

Crimp Machine



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Important Safety Information

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 with 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 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

Read and understand the operator's manual before attempting to operate this machine. Failure to follow operating instructions could result in injury or damage to the equipment.

1. Prevent Unauthorized Operation

Do not permit anyone to operate this machine unless they have read and thoroughly understand this manual. Failure to follow operating instructions could result in injury or damage to the equipment.

2. Wear Safety Glasses

Risk of eye injury! Eye protection required at all times during the installation, operation and maintenance of this machine.

3. Avoid Pinch Points

Stay clear of the crimp ring, keep your hands clear of all moving

parts. Do not allow anyone, other than the operator, to stand close to the machine.

4. Maintain Dies with Care

Dies used in the crimp machine are hardened steel, offering the best combination of strength and wear resistance for long life. Hardened 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

Use Only Danfoss or Danfoss approved products.

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. Die Change

Follow prescribed directions regarding tooling change in the manual.

8. Keep Work Area Clean

Cluttered areas and benches invite accidents.

9. Emergency Stop Button

The controller is provided with an emergency stop button. In case of an emergency, actuate the emergency button on the front of the controller. After the emergency stop button has been activated, the production area is without function, but all assemblies are still energized. De-energize the equipment via the main switch.

Specifications

Electrical Service Options		Amps	
		50Hz	60Hz
ET5040-001-230	Crimp Machine, 230V, 3 Phase (50/60 Hz)	16.8	20.6
ET5040-001-380	Crimp Machine, 380V, 3 phase (50/60 Hz)	10.2	12.4
ET5040-001-400	Crimp Machine, 400V, 3 Phase (50/60 Hz)	9.7	11.8
ET5040-001-420	Crimp Machine, 420V, 3 Phase (50/60 Hz)	9.7	11.2
ET5040-001-460	Crimp Machine, 460V, 3 Phase (50/60 Hz)	8.4	10.2
ET5040-001-480	Crimp Machine, 480V, 3 Phase (50/60 Hz)	8.0	9.8

⚠ NOTE: Machine was shipped without Hydraulic Oil: Customer will need to supply 13.2 gallons or 50 liters of AW46 (ISO46) hydraulic oil, after filling use reservoir cap dip stick to check level. (Note: Do not attempt to run machine prior to filling with hydraulic fluid).

Weight: 1,050 lbs. (Dry)

Noise Level: 63 dBA

Overall Machine Dimensions:

- Width: 34"
- Depth: 25"
- Height: 52"- 70" (Adjustable)

Motor: 5 HP

Machine Setup and Installation

⚠ CAUTION:

Read and understand the operator's manual before attempting to operate this machine. Failure to follow operating instructions could result in injury or damage to the equipment.

Environment

1. The machine should be installed indoors on a level surface and operated in a clean dry environment, under normal atmospheric pressure. Avoid high humidity, dusty environments. (Optimal operating temperature: 50°F to 95°F)
2. Cover machine when not in use.

Height Adjustment

1. Machine was shipped with adjustable legs fully retracted.
2. Remove machine from shipping crate and set in desired production location.
3. Use a fork lift to lift the machine to the desired working height. (See figure 1)
4. Remove the (4) ball detent pins from each leg and extend the legs to the desired position and re-insert the ball detent pins.
5. Confirm all legs are extended the same distance and the ball detent pins are

⚠ CAUTION:

Never get underneath the machine and keep the load low during transport.



Figure 1

Filling Hydraulic Fluid Reservoir

1. **Machine is shipped without hydraulic fluid.**
2. Remove the front panel on the machine to access the oil reservoir fill cap. Fill the reservoir with 50 liters (13.2 gallons) of AW-46 (ISO46) hydraulic fluid. Replace the vented oil filler cap when the correct oil level has been reached. (See figure 2)
3. The oil level can be checked with the oil level dipstick attached to the vented cap. (See figure 3)
4. Review instructions below for ventilating the hydraulic system prior to operating.

Connecting the Electric Supply

The machine is factory set to customer electrical supply requirements as noted on electrical pigtail. (See figure 4)

1. Note: The machine has six voltage options. If your electrical supply changes, voltage settings and amperage settings have to be changed. Contact customer service for assistance.
2. The machine is supplied with a 12' electrical pigtail that will require wiring to customer supplied plug/service by a qualified electrician.
3. The connecting plug must rated for the service connection and comply with local electrical regulations!
4. After connection to a power source, if the head does not actuate, the rotation of the electrical motor is incorrect and two phases must be switched in the electrical plug or service.

Ventilating the Hydraulic System

1. After filling or changing the hydraulic oil, the hydraulic system needs to be ventilated.
2. Cycle the machine several times by advancing and retracting the crimp head. Upon completion, leave the crimp head in the fully retracted position.
3. Turn the power off to the machine prior to ventilating.
4. Ventilate the hydraulic system by loosening (2) screws on top of the crimp head using a 5 mm allen wrench. (See figure 5)
5. Upon completion, retighten the vent screws.

⚠ NOTE: Always ventilate the system after filling or changing the hydraulic oil.



Figure 2



Figure 3



Figure 4



Figure 5

Control Symbols Overview

The following symbols and buttons are utilized in the operation of the crimp machine:



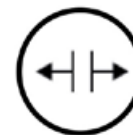
Emergency Stop Button – In the event of an emergency, press the red emergency stop button on the front of the control panel. To restart, pull and twist the emergency stop button.



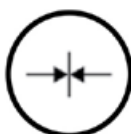
Motor off – to switch off the hydraulic motor.



Motor on – to switch on the hydraulic motor.



Opens the crimp tooling.



Closes the crimp tooling.



Takes you back to the Home screen.



Crimp tooling opens automatically after crimping.



Crimp tooling does not open automatically after crimping. Manual retract required.



Takes you to the machine settings.



User name.



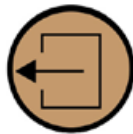
Password entry.



Takes you back to the previous screen.



Displays the next screen.



Exits existing screen, and returns to menu screen.



Activates foot switch control.



Crimp Nominal Diameter.

Control Symbols Overview



Crimp tooling diameter.
(Size)



Displays current tooling position



Offset to crimp target.



Select the number of pieces
to be produced. (Manual
operation only)



Target is the die change
position.

Tooling Installation - Using Quick Die Change Tool QDC

Step 1



Figure 6

After fitting and hose selections are made on menu screens, screen will display correct tooling for application.

Step 2



Figure 7

Align and insert the eight pins of the QDC tool with the holes in the front of desired crimp dies in the storage rack. Rotate the handle to the right (clockwise) to remove the crimp dies from the storage rack.

Step 3



Figure 8

Position the QDC tool with crimp dies in the center of the crimp head. Make sure the holding pins are aligned with the bore holes in the base or intermediate dies and gradually jog - close the crimp head while confirming all eight pins are aligned.

Step 4

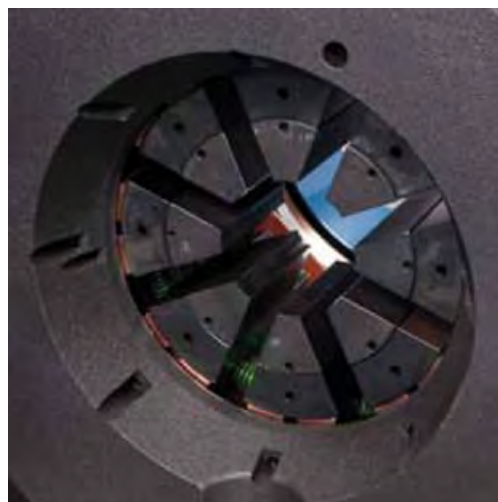


Figure 8

Remove the QDC tool and retract the crimp head. Confirm the crimp dies are secure, then press the check button to acknowledge installation of correct tooling for application.

Tooling Removal - Using Quick Die Change Tool

Step 1



Figure 10

When prompted to make a tooling change, close the head to the QDC position. Head will stop and light will no longer illuminate when in QDC position.

Step 2



Figure 11

Align the eight pins on the QDC tool with the holes on the crimp dies, insert the pins fully into the crimp dies until magnets are fully seated.

Step 3



Figure 12

Gradually retract the crimp head completely until the crimp die holding pins have completely disengaged from the intermediate dies.

Step 4



Figure 13

Place the crimp dies into the storage rack, rotate the QDC to the left, (counter clockwise) this locks the die segments into the storage rack.

Tooling Installation/Removal - Adapter and Large Bore Dies (Die-Key)

Tooling Installation with Die Key

1. Position the crimp head, leaving site holes (A) exposed.
2. Turn off the machine on the main switch.
3. Insert and hold (depress) the die key in hole (A).
4. Insert the crimp die segment as shown with the holding pin in the bore hole B.
5. Release the pressure on holding pin A by pulling out the die key.
6. This die should now be securely connected.
7. Repeat same procedure for each die.
8. Upon completion, restart machine.



Figure 2 C Die Key A B

Tooling Removal with Die Key

1. Partially open the crimp head leaving site holes (A) exposed.
2. Turn off the machine on the main switch.
3. To remove the crimp dies hold the crimp die to be changed in one hand. With the other hand push and hold the die key in the bore hole A in the base die C.
4. Remove the die and release the pressure on holding pin A by pulling out the die key.
5. Remove the remaining die segments using the same procedure.
6. Restart the machine.

General Notes for Crimping

Check the achieved crimp diameter after the first crimp. If there are discrepancies between actual size, ovality and specification value an offset adjustment must be entered. (See page 13 for instructions). Differences may occur due to spring back of the fitting socket after the crimping, as a result of hose or fitting tolerances, or differing material hardness of the fittings.



ATTENTION: Always insert a full set of matching dies.



ATTENTION: Do not crimp on the base dies.

Operating Instructions Crimp Selections - Auto Mode

Follow the settings and calibration steps prior to initial production use of the machine (Page 19)

Step 1



Figure 14

Rotate the main power switch (See figure 14) on the right side of the machine to the "On" position. Wait for the machine to boot up.

Step 2



Figure 15

Select "Crimp Selections" for Danfoss Factory Pre-populated Specifications (See figure 15)

Step 3



Figure 16

Select desired product line. (See figure 16)

- Aeroquip
- Everflex
- Industrial
- Weatherhead
- Synflex

Note: Favorites icon provides direct selection of commonly used crimp selections.

Step 4



Figure 17

Select Hose Series (Use either method A or method B):

- Use scroll bar on right side of screen to scroll through the available hose series. Make selection by touching hose series, then press check mark. (See figure 17)
- Touch filter box on the left, key pad will pop up, type in desired hose series and press check mark.

Note: Key pad will disappear and selected series will populate in option A. Then press check mark.

Operating Instructions

Crimp Selections - Auto Mode Continued

Step 5



Figure 18

Screen will prompt you to select "Hose Dash" size, press down arrow to view options. Make selection by pressing desired dash size. (See figure 18)

Step 6



Figure 19

Next select "Fitting Type" by pressing down arrow to view options and pressing desired "Fitting Type". (See figure 19)

Step 7



Figure 20

Press Check prompt on bottom of screen to finish selection process and to display tooling requirements for hose series selection. (See figure 20)

Step 8

Install the defined dies per the load/ unload procedure. (Page 9) Select the check mark when the correct dies are securely installed. (See figure 20)

Step 9



Figure 21

"Current Selection" screen displays selected product, assembly instructions and appropriate specifications. (See figure 21)

Operating Instructions

Crimp Selections - Auto Mode Continued

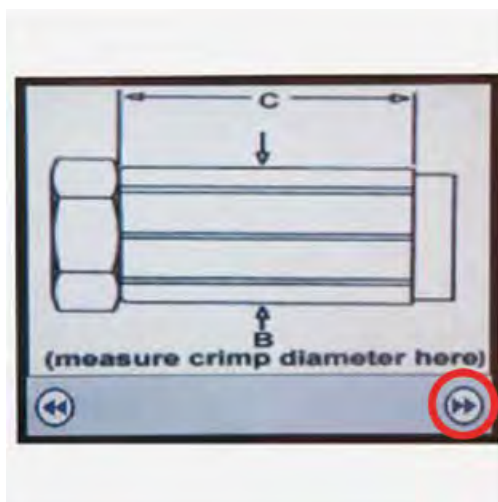


Figure 22



Figure 23

Step 10

Load hose & fitting into machine.

1. Locate fitting to proper position.
2. Activate crimper by depressing cycle start button on controller or foot pedal if activated.

Step 11

1. After first crimp, compare achieved crimp dimensions
2. against crimp specifications.



Step 12

If achieved crimp is larger or smaller than specification, enter offset to correct. Offset will automatically be saved for specific hose configuration.



NOTE: Product assembly information is displayed in box on right side of screen. Additional information (Such as photos, See figure 22 & 23) are available by pressing the question mark icon. (See figure 21).



Figure 24

Operating Instructions

Crimp Selections - Auto Mode Continued



Crimp tooling diameter.



Takes you back to the Home screen.



Crimp diameter tolerance.



Crimp diameter tolerance.



Crimp Position Specification.



Crimp Position Tolerance.



Correction / offset to diameter.



Takes you back to the previous screen.



Add current selection to Favorites Menu.



Open Favorites Menu.



Crimp tooling does not open automatically after crimping. Manual retract required. (Touch to change)



Crimp tooling opens automatically after crimping.



Opening Diameter. The tool automatically retracts to set opening diameter after crimp when green icon is displayed. (Touch to set).



Displays product information.



Returns you to Home screen.



Displays the next screen.



Current Tooling Position

Operating Instructions

Manual Operation

Follow the settings and calibration steps prior to initial production use of the machine (Page 18)

NOTE: Manual Operation is for crimping hose & fittings not in the pre-populated Danfoss database.

Step 1



Figure 25

Rotate the main power switch located on the right side of the machine to the "On" position. Wait for the machine to boot up. (See figure 25)

Step 2



Figure 26

Select "Manual Operation". (See figure 26) Note: "Manual Operation" allows operator to enter and save their own desired crimp specifications.

Step 3



Figure 27

Manual Operation Screen is shown in figure 27. See explanation of all icon on page 16. See operation sequence on page 18.

Operating Instructions

Manual Operation Continued

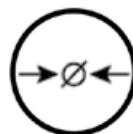
Icon Explanations:



Data entry field for naming custom crimp specification. Note: Entry not required for operation. Save required to retain for future use.



Clears data entered from data entry field.



Crimp diameter target (User defined via pop up numerical keypad).



Set desired automatic retract opening diameter/ position.

NOTE: The crimp tooling automatically retracts to this opening diameter only when green icon is displayed. 



Offset for achieved diameter correction. Click icon to enter value.



Set dwell time. (Time at fully closed position prior to auto open)



Tooling diameter. Tooling auto populates, displaying suggested tooling for target crimp diameter. Note: User may input an alternate tooling selection.



Auto Open
Red - Off
Green - On
(Touch icon to change)



Quick die change: Initiates the die change, install sequence. (Touch to change).



Save data to user input database.



Additional inputs (to switch parameters) (Page 17)



Return to "Home" screen.



Select number of pieces to crimp.

NOTE: Not required to crimp. "0" selection will allow unlimited crimps.

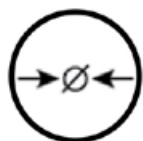


Displays total number of pieces crimped so far.



Displays current position of crimp tooling/pressure of crimp.

Adjusting the Switching Point of the Crimp Machine



Adjust the switching point of the machine from closing speed to (slow) crimping speed in the "Switching Point" fields, either based on the displacement or the The value first reached by the machine triggers switching from closing to crimping speed.



Takes you back to the previous screen.

Operational Steps

1. Define crimp specification in the appropriate field
2. Reference the controller specified die required
3. Load the appropriate dies utilizing the QDC button and instructions listed in this manual for safe die installation
4. Verify uncrimped fitting diameter is smaller than the 'switching point' dimension (see Pg 18). Adjust to adhere as needed.
5. Set any desired dwell time to hold the crimp in the closed position before auto opening (if desired)
6. Set the auto opening diameter (if desired)
7. Safely locate the fitting properly within the crimp tooling
8. Activate crimper by depressing the cycle start button on the controller or the foot pedal if activated, completing the crimp
9. Measure the crimped fitting to proper specification
10. If achieved crimp is larger or smaller than acceptable range, enter the needed numerical correction in the offset field (+/-).
11. Save the crimp setting under a user specified name (if desired).

Settings

NOTE: Walk through all machine settings during initial machine set-up.

Setting #1 - Controller Log-in



Figure 31



Figure 32

Select the settings icon to access the settings menu's. (See figure 31)



Enter your user name.
Note: Factory default is "user". (See figure 32)



Enter your password.
Note: Factory default is "user". (See figure 32)



Press the "Check" icon to log-in to the "Settings" Menu.



Language

Select desired language by selecting "Flag" icon. (See figure 33)



Figure 33

Displays the language selected. (See figure 33)



Press forward arrows to display the next "Settings Menu".



Setting #2 - Display Units of Measurement

Setting #2 - Display Units of Measurement



Figure 34

A

=

B

=

Diameter settings and pressure units display menu. (See figure 34) Select unit of measurement for distance, press desired icon, "MM" or "Inches".

Displays the selected unit of measurement in Millimeters or Inches.

Select unit of measurement for pressure, press desired icon, "Bar, PSI, or MPa". (See figure 34)

Displays the selected unit of pressure measurement in "Bar, PSI, or MPa". (See figure 34)

Software Version



Return to previous setting (Back)



Proceed to next setting (Forward)

Settings screen displays current software version loaded. (See figure 35) No user adjustment or selection is needed.



Figure 35

Settings

Setting #3 - User Administration



Figure 36

Machine users and privileges can be set from the user administrator screen. If not desired, proceed to the next screen via arrow forward.



Enter your user name. (See figure 36)



Enter your password. (See figure 36)



Displays your access rights (Administrator or Set-up staff).



Selects the next user from the list, if available.



Selects the previous user.



Adds user to the list.



Delete a user from the list.



Displays the previous screen



Displays the next screen.



Exits settings menu.

Settings

Setting #4 - Tooling Editor



Figure 37

Dies displayed by nominal size. Example: ET5040DC-M320S = 32.0

NOTE: When the machine is delivered, the tooling editor contains all of the Danfoss die sets. Remove the dies not purchased with the machine to direct the machine to the available dies. (See figure 37)



Add a new die set to the list.



Delete a die set from the list.



Restore complete Danfoss tooling list.



Return to previous setting (back).



Proceed to next setting (forward).



Exit settings menu.

Settings

Setting #5 - Product/Operational Updates

Updates will be provided via e-mail or online drop box storage. After downloading, store a copy of the files on an empty USB storage device in 'FAT32' format. **Do not utilize the 'Quick Format' Option.**



Figure 38



Figure 39



Download from USB

Install the USB device into the back of the controller and press the download



Upload to USB

Exit settings menu. Upload to USB also available for product library backup and machine to machine transfer.



When complete and successful, an image with a green thumb up will pop up on the screen. Select the check mark to acknowledge.



Exit the settings menu.

If no updates are being loaded, step to next setting field via.



Settings

Setting #6 - User Input Crimp Database

Review user input database and related crimp specifications. (See figure 40)

Delete any unneeded specifications.



Figure 40



Displays the previous setting (back).



Displays the next setting (forward).



Delete the highlighted specification.



Exit the settings menu.

Settings

Setting #7 - Machine Settings

NOTE: Most fields here are for reference only and should not be updated by the customer.



Figure 41



Adjusted zero point and/or reference point of the machine. No user adjustment.



Factory position for die change. No user adjustment.



Hydraulic motor run time after crimping. (Power saver function). Adjustable by customer.



Total number of completed machine cycles (life of machine).



Displays the previous setting (back).



Displays the next setting (forward).



Exit settings menu.

Settings

Setting #8 - Calibration Procedure



Figure 43

Adapter Dies and 32 mm Dies must be installed for calibration procedure as directed. (See figure 42) Follow safe tooling installation instructions.



Figure 44

Install small end of mandrel as directed. (See figure 43 & 44) (ET5040C-0019 tool)



Figure 45

Press the motor on button to activate the hydraulic motor and then crimp onto the small end of the mandrel until the green light no longer is illuminated.

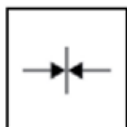


Figure 46

Retract the crimp head until the large end mandrel loosely fits in. Rotate the calibration tool and insert the large end into the crimp head and advance the crimp tooling by depressing the advance button. (See figure 45).

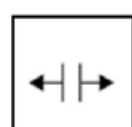


Motor On

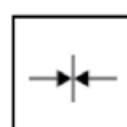


Advance

⚠ KEEP HANDS CLEAR



Retract



Advance

⚠ KEEP HANDS CLEAR

Settings

Setting #8 - Calibration Procedure Continued



Figure 46

When fully advanced, the advance button illumination will turn off indicating head is fully advance. The display screen will change showing calibration complete. (See figure 46) Fully retract head and remove calibration tool and press the enter button.

Maintenance

**WARNING**

Power down the machine and lock out the main breaker prior to performing maintenance.

Daily Maintenance Procedures:

- Open the crimp tool completely.
- Power down the machine.
- Clean the master dies and crimp head of any foreign debris.
- Check visually for oil leakage. Wipe down any residue.
- Check the crimp head and associated parts for cracks, signs of damage and wear.
- Check the detent pins on the crimping dies for damage.

Monthly Maintenance

- Switch off the motor and switch off the machine on the main switch.
- Check the hydraulic hose assemblies and connections for leaks below the cabinet
- Check hydraulic oil level with the oil level stick attached to the vented cap by removing the front panel.

Six-month Maintenance

- Check the bearing plates for wear and galling. Worn bearing plates need to be exchanged.
- If replacement is required, contact customer service.

Annual Maintenance

- Switch off the motor and turn off the machine on the main switch.
- Pump out old oil and fill with 13.2 gallons or 50 liters of new AW46 (ISO46) hydraulic fluid.
- Perform calibration procedure as detailed in settings #8 (page 25).

Hydraulic Oil Change

- Fully open crimp head.
- Switch off & lock out power.
- Remove rear panel and pump out old oil from reservoir from the filler port.
- Refill with 50 liters (13.2 Gallons) of AW46 hydraulic oil.
- Verify fill level with filler cap dip stick.
- Cycle crimp machine head and ventilate the crimp head per instructions on page 5.

Accessories



Figure 47



Figure 48



Figure 49

Automatic Back Stop

Replaces controller activation of the crimper, hose must engage with backstop to cycle the crimper. (See figure 47) Crimping stops whenever the hose no longer touches the back stop face. Set actuation position of backstop prior to plugging into crimper.

Manual Back Stop

Used for position control. Locate assembly to desired position in crimp jaws. Adjust backstop to contact fitting assembly. (See figure 48)

Foot Switch

Optional foot switch is available for crimp head activation. (See figure 49) To activate foot switch, select button on controller.



Figure 50



Figure 51



Figure 52

Mirror

Provides operator with additional viewing angles to assist in correct alignment of crimp Position. (See figure 50)

Magnetic Work Light

Magnetic work light provides improved visibility in low light conditions. (See figure 51)

Table Top Die Storage Rack

Additional storage for standard size dies. (See figure 52)

Standard Die Part Numbers

ET5040 Standard Die Part Numbers:

Capability of crimping Danfoss hose products ranging from -3 (3/16") through -40 (2 1/2") in certain constructions. The ET5040C-0023 kit includes the (11) most popular dies required to crimp Danfoss's most common hose product lines. The standard ET5040DC dies require the use of the ET5040C-0001 adapter dies.

These die packages are used for hydraulic hoses and industrial hoses with a finished crimp diameter up to 3.46 in. (88mm). achine and lock out the main breaker prior to performing maintenance.

Standard Die Set Part Numbers	Die Size		Die Length		Crimp Range			
					Minimum		Maximum	
	mm	in	mm	in	mm	in	mm	in
ET5040DC-M070S	7,0	0.276	82,0	3.23	7,0	0.28	9,0	0.35
ET5040DC-M090S	9,0	0.354	82,0	3.23	9,0	0.35	12,0	0.47
ET5040DC-M120S	12,0	0.472	82,0	3.23	12,0	0.47	15,0	0.59
ET5040DC-M150S*	15,0	0.590	82,0	3.23	15,0	0.59	18,0	0.71
ET5040DC-M180S*	18,0	0.709	82,0	3.23	18,0	0.71	21,0	0.83
ET5040DC-M210S*	21,0	0.827	82,0	3.23	21,0	0.83	24,0	0.95
ET5040DC-M240S*	24,0	0.945	82,0	3.23	24,0	0.95	28,0	1.10
ET5040DC-M280S*	28,0	1.102	82,0	3.23	28,0	1.10	32,0	1.26
ET5040DC-M320S††	32,0	1.259	82,0	3.23	32,0	1.26	37,0	1.46
ET5040DC-M355S	35,5	1.398	82,0	3.23	35,5	1.40	39,5	1.56
ET5040DC-M370S*	37,0	1.457	82,0	3.23	37,0	1.46	42,0	1.66
ET5040DC-M420S*	42,0	1.654	82,0	3.23	42,0	1.66	46,5	1.83
ET5040DC-M450S	45,0	1.772	82,0	3.23	45,0	1.77	50,0	1.97
ET5040DC-M465S*	46,5	1.831	82,0	3.23	46,5	1.83	52,0	2.05
ET5040DC-M505S	50,5	1.988	82,0	3.23	50,5	1.99	54,0	2.13
ET5040DC-M520S*	52,0	2.047	82,0	3.23	52,0	2.05	55,0	2.17
ET5040DC-M550S*	55,0	2.165	82,0	3.23	55,0	2.17	60,0	2.36
ET5040DC-M570S	57,0	2.244	82,0	3.23	57,0	2.24	64,0	2.52
ET5040DC-M590S	59,0	2.323	82,0	3.23	59,0	2.32	66,0	2.60
ET5040DC-M620S	62,0	2.441	82,0	3.23	62,0	2.44	70,0	2.76
ET5040DC-M690S*	69,0	2.717	82,0	3.23	69,0	2.72	73,0	2.87
ET5040DC-M720S	72,0	2.835	82,0	3.23	72,0	2.84	78,0	3.07
ET5040DC-M775S	77,5	3.051	82,0	3.23	77,5	3.05	85,5	3.37
ET5040DC-M790S	79,0	3.110	82,0	3.23	79,0	3.11	88,0	3.46

*Included in the ET5040-0023 standard die kit

††Supplied with ET5040 crimp machines and required for calibration

Require ET5040C-0001 adapter die Each set includes 8 individual dies

Large Bore Die Part Numbers

ET5040 Large Bore Die Part Numbers:

Capability of crimping Danfoss hose products ranging up to -64 (4") in certain constructions. The large bore ET5040 dies do not require an adapter die and are inserted one segment at a time. The large bore dies are typically used for large I.D. Danfoss Industrial hose and -48 two wire braid hose.

Standard Die Set Part Numbers	Die Size		Die Length		Crimp Range			
					Minimum		Maximum	
	mm	in	mm	in	mm	in	mm	in
ET5040PBL-M710	71,0	2.795	118,0	4,65	71,0	2.80	78,0	3.07
ET5040PBL-M740	74,0	2.913	118,0	4,65	74,0	2.92	83,0	3.26
ET5040PBL-M780	78,0	3.070	118,0	4,65	78,0	3.07	86,0	3.38
ET5040PBL-M840	84,0	3.307	118,0	4,65	84,0	3.31	92,0	3.62
ET5040PBL-M860	86,0	3.386	118,0	4,65	86,0	3.39	94,0	3.70
ET5040PBL-M900	90,0	3.543	118,0	4,65	90,0	3.55	99,0	3.89
ET5040PBL-M960	96,0	3.800	118,0	4,65	96,0	3.80	105,0	4.13
ET5040PBL-M1030	103,0	4.055	118,0	4,65	103,0	4.06	113,0	4.44
ET5040PBL-M1060	106,0	4.173	126,0	4.96	106,0	4.18	116,0	4.56
ET5040PBL-M1110	110,0	4.331	126,0	4.96	110,0	4.33	121,0	4.76
ET5040PBL-M1160	116,0	4.567	126,0	4.96	116,0	4.57	127,0	4.99
ET5040PBL-M1210	121,0	4.764	126,0	4.96	121,0	4.77	133,0	5.23
ET5040PBL-M1260	126,0	4.961	126,0	4.96	126,0	4.96	138,0	5.43
ET5040PBL-M1310	131,0	5.157	126,0	4.96	131,0	5.16	144,0	5.66

Each set includes 8 individual dies

430 U-Series Part Numbers

ET5040 430 "U" Series Die Part Numbers:

Capable of crimping Weatherhead 430 "U" series fittings ranging from -08 (1/2") through -32 (2").

430 "U" Die Set Part Numbers	430 "U" Fitting Size	Crimp Range							
		Die Size		Die Length		Minimum		Maximum	
		mm	in	mm	in	mm	in	mm	in
ET5040DC-M210S	43006"U" Fittings	21,0	0.827	82,0	3.23	21,0	0.83	24,0	0.95
ET5040DC-08U*	43008"U Fittings	28,0	1.102	82,0	3.23	28,0	1.10	32,0	1.26
ET5040DC-M280S	43010"U" Fittings	28,0	1.102	82,0	3.23	28,0	1.10	32,0	1.26
ET5040DC-12U*	43012"U" Fittings	32,0	1.259	82,0	3.23	32,0	1.26	36,0	1.41
ET5040DC-16U*	43016"U" Fittings	42,0	1.653	82,0	3.23	42,0	1.65	46,0	1.81
ET5040DC-20U*	43020"U" Fittings	52,0	2.047	82,0	3.23	52,0	2.05	57,0	2.24
ET5040DC-24U*	43024"U" Fittings	57,0	2.244	82,0	3.23	57,0	2.24	62,0	2.44
ET5040DC-32U*	43032"U" Fittings	69,0	2.716	82,0	3.23	69,0	2.72	75,0	2.95

*Included in the ET5040-0022 430 "U" Series die kit
Require ET5040C-0001 adapter die Each set includes 8 individual dies

About Danfoss Power Solutions FC

Danfoss hoses, fittings, and tooling provide the ultimate fluid conveyance solutions for a variety of equipment and applications around the world. We proudly engineer to support a sustainable future for tomorrow.

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Danfoss Power Solutions

14615 Lone Oak Road
Eden Prairie, MN 55344, USA
Phone: 952-937-9800

Danfoss Power Solutions (US) Company

2800 East 13th Street
Ames, IA 50010, USA
Phone: +1 515-239-6000

Danfoss Power Solutions GmbH & Co.OHG

Krokamp 35
D-2439 Neumünster, Germany
Phone: +49 4321 871 0

Danfoss Power Solutions ApS

Nordborgvej 81
DK-6430 Nordborg, Denmark
Phone: +45 7488 2222

Danfoss Power Solutions Trade (Shanghai) Co. Ltd.

Building #22, No 1000 Jin Hai Rd
Jin Qiao, Pudong New District
Shanghai, China 201206
Phone: +86 21 3418 5200w

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