



KH32K HOSE CRIMPING MACHINE

Operating Instruction Manual

ENGLISH

TABLE OF CONTENTS

itroduction
itial Setup / Control Panel
ser Interface / Operating Modes
istalling and Removing Die Sets
rimping Kurt Hose - Preset Library8-4
rimping with a Manual Configuration10-12
ine Tuning the Crimper
echnical Data / Circuit Diagrams1
ssembly Drawings / Part Numbers
laintenance / Warranty
roubleshooting Tips / Optional Camera and Backstop
ontact Information

IN THE BOX



Die Quick Change Tool



Die pins (20) / Quick change tool pins (20)



Leveling Feet



Handles for strap-lifting (4)



Relays (2)



Self-oiling reservoir can





Fuses (2)



12 dies / die holders / crimper base

CRIMPER DATA

Fill out crimper information for quick reference.

REGISTER YOUR WARRANTY ONLINE AT: KURTHYDRAULICS.COM



TABLE OF CONTENTS

INTRODUCTION

The Kurt Hydraulics KH32K Crimper is part of our new product series. Featuring a wide crimping range, a self-oiling system and a larger head opening that allows up to 2-inch hose couplings and non-standard bends. Your new Kurt crimper comes with a stand that holds dies, foot switch and additional spare parts and accessories.





Don't operate the machine if the hex bolts on the front of the head unit are loose. Torque hex bolts on the front of the head unit to 89 ft-lb ±14 ft-lb. Torque only the 10 mm hex bolts (20).

INITIAL CRIMPER SETUP







- 1. Unbox and screw 4 leveling feet to the base and operate it in a dry, wellventilated area above 50°F.
- Fill the oil reservoir with L-HM32 Anti-Wear hydraulic oil (cold weather) or L-HM46 hydraulic oil (hot weather). Add via filler cap behind crimper head. Slowly add oil until the level reaches 3/4 full on the dipstick (33.75 liters). (A)
- Plug in the crimper: Machine voltage is 220V/60HZ (A.C.). Be sure to use a properly grounded single phase outlet. Plug type: L6-20P, 20A Twist-Lock Plug 2P 3W 250VAC L6-20P BK/WT
- 4. Lubricate the die shoes with lithium grease.
- Add oil to oil reservoir on head: Oil will continuously lubricate die/head interface. (B) Raise lever on top to start oil flow, lower lever to stop flow. Knurled top cap can be turned left and right to regulate oil flow.



 Place oil pan on the mounts on the side of the cabinet and insert tube in pan to collect excess lubricant or debris. (C)

CRIMPER CONTROL PANEL



- Stop/start switch: Use to stop unit, then turn button to right to release emergency stop switch before pressing ON button to start.
- **2. On button:** Starts the hydraulic pump motor.
- 3. Display interface: Touch screen to control unit, shows real-time data.
- 4. Close button: Closes the dies.
- 5. Open button: Opens the dies.
- 6. ON/OFF Main Power

USER INTERFACE HOME SCREEN



OPERATING MODES

SPECIALTY OPERATING MODES

opening diameter

Pressure control mode: Crimp hoses using a set inch Name pressure. Specialty operating mode. REF Segmented crimp mode: Enter three crimping points and the machine will crimp them one by one. PSI 0.0Trigger switch mode: Crimp hoses using a trigger switch. Crimper will activate when triggered. Not standard / optional configuration only. $T_{\rm c}$ 0.0 S MOST COMMON OPERATING MODES To 0.0 Automatic mode: Press CLOSE button once and S the crimper will keep cycling through close and ± Φ open sequence until OPEN button is pressed again. Na11 Open time delay and close time delay settings are very useful in this mode. 1.749 0.000Φ Nm10 Semi-automatic mode: Requires operator to press CLOSE button. Crimper automatically opens when crimp is completed. H -E Manual mode: Must hold CLOSE button until fitting • is crimped to programmed closed diameter. Then, hold OPEN button until dies open to programmed

INSTALLING AND REMOVING DIE SETS

1. Choose the die: The customers can choose the die according to the hose. The surface of die has the dimension of the die bore when fully closed. Before installing, align the dies numerically in the clockwise direction as shown starting with F/1 then F/2, etc...

FOR FIRST TIME OPERATION

- 2. Bleed the crimper head: We recommend bleeding any air out of the crimper head the first time the machine is operated.
 - A. Place crimper in DIE CHANGE OPERATING MODE.
 - B. Press the open button until die shoes are totally open.
 - C. Loosen the bleed valve on the top of the crimper head (behind of self-oiling reservoir).
 - D. Press the CLOSE button until the oil overflows from the air valve.
 - E. Tighten the air valve.
 - F. Repeat Steps A to D, until there is no more air coming from the machine, only oil.



Do not operate bleed valve when crimping a fitting.

3. Quick Change Tool: Use the Quick Change

Tool to install an entire die set.



Hold handle down while transferring dies to and from the crimper head.











INSTALLING AND REMOVING DIE SETS



Installing the dies:

- A. First, be sure crimper is ON and in the CHANGE DIE OPERATING MODE on the touch screen.
- B. Next, be sure the crimper head unit is fully OPEN.
- C. Use the Quick Change Tool to load a die set from the die storage under the crimper unit.
- D. Align the pins on the head to the holes on the dies.
- E. Insert the die set into the crimper head while aligning the bottom die pin to the corresponding bottom die shoe. (photo 1)
- F. Very slowly jog the CLOSE button while holding the Quick Change Tool and aligning the other die pins to the appropriate die shoe holes. (photo 2-3)





Removing the dies:

- A. First, be sure crimper is ON and in the CHANGE DIE OPERATING MODE on the touch screen.
- B. Next, be sure the crimper head unit is fully CLOSED.
- C. Insert the Quick Change Tool into the installed die set.
- D. While holding the tool handle, use the OPEN button to open the crimper and release the die pins from the die shoes.

REMOVAL TIP: Angle Quick Change Tool downward (photo 4) to release bottom die pin and carefully removed the die set and replace in die storage under crimper unit. (Failure to keep dies upright can drop and break die sets)



Failure to properly align die-set pins with the die shoes before fully closing may result in crushed die pins and/or bend the pins in the quick change tool. (extras are provided with crimper)

CRIMPING A KURT HOSE ASSEMBLY

NAME: When name field is blank, a hose preset is not loaded. This is where the selected hose preset will show after completing the following steps.



Step 1. Open hose library: from the home screen, select folder icon to open hose library

Touch the blue					
number: To select a					
hose preset, touch and					
hold the blue number.					

Name			Fir	nd Next		inch	
	Name	D	•••	◆•• ⊕ •• ◆	Φ±	\odot	
0	R1S-04 K2	14.0	0.645	0.980	0.000	0.0	
1	R1S-04 S	14.0	0.595	0.980	0.000	0.0	1
2	R1S-04 W	14.0	0.655	0.980	0.000	0.0	
3	R1S-06 K2	18.0	0.740	1.126	0.000	0.0	
4	R1S-06 S	18.0	0.725	1.126	0.000	0.0	
5	R1S-06 W	18.0	0.790	1.126	0.000	0.0	1
6	R1S-08 K2	21.0	0.905	1.339	0.000	0.0	-
7	R1S-08 W	21.0	0.920	1.339	0.000	0.0	
8	R1S-10 S	21.0	0.995	1.626	0.000	0.0	
9	R1S-10 W	28.0	1.150	1.913	0.000	0.0	

Page scroll arrows:

up/down arrows can also be used to navigate the library of hose presets.

Step 2. Select Kurt hose: From library menu, enter the name of a Kurt hose in the search field **(use capital letters, search is case sensitive)** or scroll with arrows on the right of touch screen. Select the hose by touching and holding the blue number to the left of the hose. until the USE screen loads.

NOTE: Kurt hose names can be found on the hose layline. Fitting types are stamped on the shell of the fitting.

CRIMPING A KURT HOSE ASSEMBLY

Select USE: The hose crimp preset will not load until USE is selected. DO NOT select DELETE.



Selecting **Delete** will not prompt for confirmation. Preset will need to be manually reloaded.

	Name		Fir	nd Next		inch	
	Name	Q	***	* ** () ** *	Φ±	0	
0	R1S-04 K2	14.0	0.645	0.980	0.000	0.0	
1	R1S-04 S	14.0	0.595	0.980	0.000	0.0	1
2	R18-04 W	14.0	0.655	0.980	0.000	0.0	
3	RL: Use Delete	18.0	0.740	1.126	0.000	0.0	
4	R1 Fack	18.0	0.725	1.126	0.000	0.0	
5	R15	18.0	0.790	1.126	0.000	0.0	1
6	R1S-08 K2	21.0	0.905	1.339	0.000	0.0	•
7	R1S-08 W	21.0	0.920	1.339	0.000	0.0	
8	R1S-10 S	21.0	0.995	1.626	0.000	0.0	
9	R1S-10 W	28.0	1.150	1.913	0.000	0.0	

Step 3. Load hose crimp settings: select USE, or Back if you want a different hose.

NOTE: **If hose preset is accidentally deleted,** download crimper specs at: <u>https://www.kurthydraulics.com/support/crimp-specifications/</u>



Step 4. Crimper is ready: Hose name will appear in the NAME field. Crimping specs will automatically update including the opened and closed diameter and the die number.NOTE: be sure that the correct die is loaded into the machine before crimping. Die set numbers should be sequential as shown on page 6.

Installed die : This field shows which die MUST be installed for a successful crimp. BE SURE that the indicated die is installed before crimping.

CREATING A CUSTOM CRIMP PRESET (ADVANCED)



When setting up a custom crimp preset:

1. Select a die size and change the installed die to match.

Select a closed diameter.

- 3. Select an opened diameter.
- 4. Name and save the crimp setting in and open field at the end of the library.



2

Always follow manufacturer crimp specs when possible.

Long touch the blue number: To select an Installed Die Preset, touch the blue number for 2 seconds.

	CC	NTF	ROL	SYS	TEM	4.	0		Shee.		mm
	Ø	Φ±		Ø	Φ±		Ø	Φ±		Ø	Φ±
1	14.0	0.00	6	41.0	0.00	11	71.0	0.00	16	0.0	0.00
2	18.0	0.00	7	47.0	0.00	12	76.0	0.00	17	0.0	0.00
3	21.0	0.00	8	51.0	0.00	13	8.0	0.00	18	0.0	0.00
4	28.0	0.00	9	57.0	0.00	14	12.0	0.00	19	0.0	0.00
5	35.0	0.00	10	63.0	0.00	15	0.0	0.00	20	0.0	0.00
Modify							Next Pag				<u><</u>

Die 13 (8 mm) and die 14 (12 mm) are not included and can be purchased separately. Contact Kurt customer service.

Step 1. Select the installed die: From the home screen, select the Installed Die menu by touching the die number. The screen above will then show. Touch the blue number to the left of the die diameter to load the new die information into the crimper settings.

CREATING A CUSTOM CRIMP PRESET (ADVANCED)



Start a custom preset by loading an existing preset from the library. Edit the existing preset from the home screen and rename and save it as a new crimp preset in an open field at the end of the library.



Step 2. Select closed crimp diameter: From the home screen, select the CLOSED DIAMETER menu by touching the number. Use the touch screen to configure your setting. Be sure to follow manufacturer recommended crimping specs whenever it's possible. Crimp can be fine-tuned if test crimp is out of tolerance.



Step 3. Select opened diameter: From the home screen, select the OPENED DIAMETER menu by touching the number. Use the touch screen to configure your setting. Opened diameter determines how far the crimper will open when finished crimping.

CREATING A CUSTOM CRIMP PRESET (ADVANCED)



Step 4. Save new preset: from the home screen, select floppy disk icon. You'll be asked to CONFIRM OPERATION. Select CONFIRM and place cursor in the numbered cell for the new preset.

Find Next

inch

Select empty cell and name: Place cursor in an empty cell and use the keyboard. Press ENTER when finished. Name



Names are case sensitive. Choose a name that is easy to search.

	Name		Ø	•••• • ••••	← •• ⊕ •• →	Φ±	\odot	
200			51.0	2.087	3.110	0.000	0.0	
201		-1	@#	\$ %	^ &	* ()	BS
202		-~ q	w	ert	y u	i o	р	{ }
204		- Cans			g n	J K	~	2
205		- Clear		SP.	ACE	m	+	=
206		Ľ.	0.0	0.000	0,000	0.000	0.0	
208			0.0	0.000	0.000	0.000	0.0	
209			0.0	0.000	0.000	0.000	0.0	

ENTER to save: After naming preset, select ENTER to save it to the library.

Step 5. Name new preset: Using the keyboard, name the new crimp preset and save it to the crimp library. The new preset can be loaded from the library any time now just like any of the pre-programmed Kurt hose presets.

FINE TUNING THE CRIMPER - CLOSED / OPENED TIME DELAY



Closed time delay: This is the time that the die stays closed in automatic mode or semi-automatic mode. The time will delay after the dies close. To change, touch the "Tc" number for 2 seconds, insert a value from 0 to 5 and select ENTER.

Name R1					
	MAX	5.000	MIN	0.000	REF
				3	P 0.0 PSI
0.	7	8	9	-	1,3.0 ,
	4	5	6	CLR	To <u>3</u> s
21	1	2	3	ESC	Na <u>10</u> Nm <u>10</u>
e l	•	0	EN	TER	A
	LL I	1000			

Opened time delay: This is the time that the die stays open in automatic mode. The time will delay after the dies open to allow time to insert a new hose assembly. To change, touch the "To" number for 2 seconds, insert a value from 0 to 5 and select ENTER.

FINE TUNING THE CRIMPER - ERROR COMPENSATION



Error Compensation: If a crimped coupling is falling out of tolerance, the closed diameter can be micro-adjusted using the Error Compensation setting. Touch the number setting for Error Compensation for 2 seconds and the keypad will appear.

Name KI					
	MAX	0.039	MIN	-0.039	REF
				0.000	P 0.0 PSI
1.	7	8	9	-	Tc 0.0 s
	4	5	6	CLR	To 0.0 s
41	1	2	3	ESC	Na <u>11</u> Nm <u>10</u>
→		0	EN	TER	AA
	E			*	

Choose a value from .039 to -.039 and select ENTER. Crimp and measure with new compensation setting and adjust again if needed.

TECHNICAL DATA

Model	КН32К	Personmended Hydroulie Oil	Winter: L-HM32
Voltage	220V/60Hz single phase	Recommended Hydraunc On	Summer: L-HM46
Motor	3 kW	Maximum Oil Volume	11.9 gallons (45 liters)
Pump	3.8 gal/min	Dimension	28.35" x 20.87" x 28.75"
System Pressure	4350 PSI	Crimp range	Ø6 - Ø51 4SH (1/8" to 2" hose)
Opening without dies	Ø4.8 inches		

HYDRAULIC SYSTEM



1	Oil tank			
2	Oil filter			
3	Pump			
4	Solenoid directional valve			
5	Low pressure relief valve			
6	High pressure relief valve			
7	Hydraulic control one-way valve			
8	Work cylinder			

CIRCUIT DIAGRAM



QS	Power switch				
КМ	A.C. contactor				
FU	Fuse				
KD	Switching power supply				
HL	Power indicator				
KA	Start button				
SBE	Emergency stop				
тс	Miniature transformer				
М	Motor				
CPU	Midget relay				
YV1	Solenoid valve close				
YV2	Solenoid valve open				
SB1	Crimping button				
SB2	Retraction button				
SQ	Back stop switch				
LS	Displacement sensor				
VFD	Frequency transformer				
BK	Voltage transformer				

ASSEMBLY DRAWING - EXPLODED VIEW - BOM

#	DESCRIPTION	PART NO.
1	Lamp	KMLDC24
2	Self-lubricating oil cup	KMSLOC
3	Machine head	KM91C9-320
4	Motor	KMM380T-50
5	Displacement sensor	KMS30-S
6	Connection trays	KM91H7-MPC
7	Hydraulic oil hose assembly	KM91H7-H1
8	Oil filter	KMOF-08
9	Pump	KMP-10YCY
10	Touch screen	KMTS-07D
11	8V transformer	KMTF-8V
12	Button	KMBDC-24W/Y/B
13	AC contactor	KMACC-60A
14	Small relay	KMSRDC-24
15	Power switch	KMPSAC-220
16	Frequency converter	KMFC-5700
17	Switch power supply	KMSPSDC24-150
18	Fuse	KMF-4A
19	Connecting terminal	KMCT-50
20	Die sleeve	KM91H7-95
21	Die rack	KM91H7-DR12
22	Pressure gauge	KMPG40
23	Leveling feet	KMABM16/4
24	10MM hex bolts	KMHSS10-20
25	Die shoes	KM91H7-DB95
26	Die shoe foam inserts	KM91H7FI-18
27	Die shoe spring	KM91H7S-18
28	Bleed Valve	KMAO/14
29	Control panel	KM91H7-TSCP
30	Oil drain plug (under unit)	KM91H7DP-30
31	Oil fill cap	KM91H70FC-30
32	Oil dipstick	KM91H7DS-20





DIE SHOE ASSEMBLY





BACK VIEW

CRIMPER ASSEMBLY DRAWING

PART NUMBERS / ELECTRONICS DETAILS





DIE SET	PART NO.
Ø8.5 die set	KMGKD95/8.5 *
Ø14 die set	KMGKD95/14
Ø18 die set	KMGKD95/18
Ø21 die set	KMGKD95/21
Ø28 die set	KMGKD95/28
Ø35 die set	KMGKD95/35
Ø41die set	KMGKD95/41
Ø47 die set	KMGKD95/47
Ø51 die set	KMGKD95/51
Ø57 die set	KMGKD95/57
Ø63 die set	KMGKD95/63
Ø71 die set	KMGKD95/71
Ø76 die set	KMGKD95/76

*8.5 mm is custom-order only (not included)



Die Quick Change Tool (part no. KMQCT-D)



Leveling Feet (part no. KMABM16/4)



Handles for strap-lifting (part no. KMLH-4)



Quick change tool pins part no. KMQCTP-01/01 (pop-up pin) part no. KMQCTP-07/01 (non-pop-up pins)



Small Relays (part no. KMSRDC-24)



Self-oiling reservoir can (part no. KMSORC)



Die pins (part no. KMDP-8)



Fuses (part no. KMF-4A)



Foot switch (part no. KMFSDC-24)

MAINTENANCE (EVERY 3 MONTHS)

- 1. Regularly retorque hex bolts on the front of the head unit to 89 ft-lb ±14 ft-lb. Torque only the 20 (10 mm hex bolts) ringing the head unit. (photo 1)
- 2. For heavy daily use, shorten the maintenance interval to 30 days (≤ 30 workdays) on the condition of full loaded operation (working pressure 4060 psi).
- 3. The working surface of the machine should be kept clean. If the crimper has not been used for a long time, check oil in reservoir and lubricate dies shoes with lithium grease before operating. (photo 2)
- 4. Regularly clean the foam inserts and inspect springs between the die shoes. Contact Kurt customer service if new foam inserts (part no. KM91H7FI-18) or springs (part no. KM91H7S-18) are required. (photo 3)
- 5. Check for loose the fittings. Tighten or replace as needed.
- 6. Check the hydraulic oil in the tank. Top off if needed. (photo 4)
- 7. Hydraulic oil should only need changing every five years. If the oil is dirty (dark), replace it with the recommended oil: L-HM32 (winter) or L-HM46 (summer). (photo 5)
- 8. If hydraulic tank oil needs to be changed, Check the hydraulic pump filter. If dirty, replace. Contact Kurt technical support for more information. (Oil filter: KMOF-08)
- 9. Don't operate the machine if the hex screws on the front of the head unit are loose. Torque screws as recommended in step 1.

Part numbers: pages 16-17

WARRANTY

he Kurt KH32K Crimper is warranted to be free from defects in material and workmanship under normal operating conditions and recommended usage for a period of 1 year from date of delivery. Any product which is shown to be defective shall be replaced or repaired free of charge or extended a credit refund of the original acquisition cost to the purchaser. This limited warranty is contingent upon the conditions that prompt receipt of notice of any defect, that purchaser establish the product has been properly installed, maintained, and operated within the limits of related and normal usage specified, and that upon request purchaser will return the defective product.

- The device is designed for hydraulic hose assembly crimping.
- When not operating the crimper, leave the dies in the open position to avoid undue internal spring compression fatigue.
- We recommend choosing the manual operating mode only when an operator is not experienced or familiar working with the crimper model.
- The included dies are not suitable for pressing division lines, for special requirements, order custom dies if needed.
- Do not operate the crimper if any of the 20 crimping head hex screws are loose or missing. If any of the screws are lost or missing, contact Kurt customer service immediately.
- Do not completely close the crimper die shoes without a die set in place.
- · Kurt will not be responsible for misuse or damage to the crimper.
- In extreme circumstances, such as extreme cold or high temperatures, choose the appropriate hydraulic oil, to keep the crimper running efficiently.
- Always use a manufacturer's crimp specifications for their products when creating a custom crimp preset or using any setting that is not preprogrammed into the preset library by Kurt.

MAINTENANCE (EVERY 3 MONTHS)



Regularly retorque hex bolts on the front of the head unit to 89 ft-lb \pm 14 ft-lb. Torque only the 20 (10 mm hex bolts) ringing the head unit.



Apply lithium grease around the inside of the crimp head to lubricate the surface between the base of the die shoes and the crimper head.



Don't operate the machine if the hex screws on the front of the head unit are loose. Torque hex bolts on the front of the head unit to 89ft-lb ±14 ft-lb. Torque only the 10 mm hex bolts (20).



Regularly clean the foam inserts and inspect springs between the die shoes. If new foam inserts (part no. KM91H7FI-18) or springs (part no. KM91H7S-18) are needed, contact Kurt customer service.



Top off the hydraulic oil as needed. There should be oil visible to the top of the flat end of the dipstick. Recommended oil: L-HM32 (winter) or L-HM46 (summer). Fill to 3/4 mark on dipstick.



The hydraulic oil tank holds 11.9 gallons of oil. It will only need changing every five years unless it starts to appear contaminated or dirty. Oil can be changed or filtered via the drain plug on the bottom of the unit.

Part numbers: pages 16-17

TROUBLESHOOTING TIPS

Part numbers pages 16-17

Issue	Cause	Remedy
1] Hydraulic pump is not working.	1.1] There is no oil in tank.	1.1] Add hydraulic oil to the tank.
	1.2] The direction of motor is not moving with the arrow on the top of the pump.	1.2] Adjust the direction of motor (motor should rotate clockwise)
2] There is no pressure in system.	2.1] The hydraulic plunger pump is damaged.	1.1] Change a new hydraulic plunger pump
	2.2] Fluid is low and there is air in the lines.	2.2] Add the hydraulic fluid, and bleed at the bleed valve on the crimper head.
3] The system is suddenly very loud.	3.1] There is debris in the oil pump.	3.1] Clean the pump
	3.2] Hydraulic oil is low.	3.2] Add hydraulic fluid (see photo 4)
	3.3] Power phase shortage / Bad outlet	3.3] Connect to new power source
4] Dies stuck in closed position	4.1] Bad reverse valve	4.1] Install a new reverse valve
	4.2] Reverse valve failure	4.2] Change relays
5] Die shoes are out of sync	5.1] Serious lack of oil between the die shoes.	5.1] Add oil to clean the die shoes. Rotate the die shoes. And dry run the machine.
	5.2] Spring is fatigued or broken.	5.2] Replace the damaged spring
	5.3] The hydraulic fluid is too thick.	5.3] Change or filter the hydraulic fluid.
6] Sensor does not work	6.1] Wire has become disconnected	6.1] Reconnect the wire
	6.2] Sensor is damaged	6.2] Change out the sensor. Contact Kurt Tech Support
7] Power trip	7.1] The electric power source is wrong	7.1] Check the electric power source

OPTIONAL CAMERA AND BACKSTOP - SOLD SEPARATELY

BACKSTOP ASSEMBLY (Part No. KMBS)

The optional backstop assembly screws into place and includes a threaded coupling stop for fast, accurate crimping.

REARVIEW CAMERA, SCREEN AND BACKSTOP (Part No. KMCAM & KMBS)

The rearview camera Includes camera and connectors, screen and mount, and hardware. Backstop assembly is also required for mounting camera and should be ordered with the camera.











Thank you for your purchase! If you have any feedback or questions please contact us:

Kurt Hydraulics // A Division Of Kurt Manufacturing

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