Continental
The Future in Motion

Perma-Crimp™ Hydraulic Hose Crimpers

PC125 and PC125M Operators Manual

SAFETY PRECAUTIONS

- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING CRIMPER.
- CRIMPER CAN PRODUCE 60 TONS OF FORCE. KEEP BOTH HANDS AWAY FROM PINCH POINTS.
- CONSULT THE CONTINENTAL CONTITECH CRIMP SPECIFICATION MANUAL FOR CORRECT CRIMPER SETTINGS AND CRIMP MEASUREMENTS.
- ALWAYS WEAR EYE PROTECTION.

MODELS COVERED

This manual is applicable to different variations of the PC125 Series and PC125M Series Crimpers.

Crimping, calibration and repair procedures are similar for both models.

Equipment Warning

Proper assembly of Continental ContiTech hose and fittings

Continental ContiTech hose, fittings and crimping equipment work together to provide an efficient and reliable hose connection. Continental ContiTech hose and fittings are part of an engineered system and are to be used in accordance with Continental ContiTech specifications. Using non-Continental ContiTech components may produce an assembly that does not meet rated performance. **Continental ContiTech does not warrant, expressly or by implication, hose assemblies that do not incorporate Continental ContiTech hose and fittings, or are not crimped in accordance with Continental ContiTech process specifications.**

Buyers may elect to attach additional or non-standard parts or equipment, or to use different manufacturing specifications as necessary to meet the requirements of the buyer or the customer's application. In such cases, the buyer has sole responsibility to qualify the hose for the applications as necessary to ensure performance capability.

For guidance in the assembly of Continental ContiTech hose and couplings, please refer to the Continental ContiTech Crimp Specifications Manual. Information in this manual is believed to be accurate, but is not warranted and is subject to change without prior notice. For the most current product information, check the Continental ContiTech website at www.contitech.us.

For technical assistance, call customer service at **1-800-235-4632.**

Table Of Content

PC125 / 125M Specifications

Die Series----------PC125 Series

Maximum Cylinder Force----------60 Ton

Maximum Hose Diameter (2 Wire)----------1 1/4 Inch

Maximum Hose Diameter (4 Wire)----------1 1/4 Inch

Maximum Hose Diameter (6 Wire)----------1 Inch

Crimper Depth - PC125 Series----------22.5 Inches
- PC125M Series----------17 Inches

Crimper Width - PC125 Series----------13 Inches
- PC125M Series ----------10.25 Inches

Crimper Height - PC125 Series----------22.5 Inches
- PC125M Series----------21 Inches

Weight - PC125 Series----------140 Lbs
- PC125M Series----------72 Lbs

Pump - PC125 Series----------Electric
- PC125M Series----------Pump Not included - Manual, Pneumatic, or Electric Available

Pump HP - PC125 Series----------1 HP (110V)

Reservoir Capacity - PC125 Series----------1 Gallon

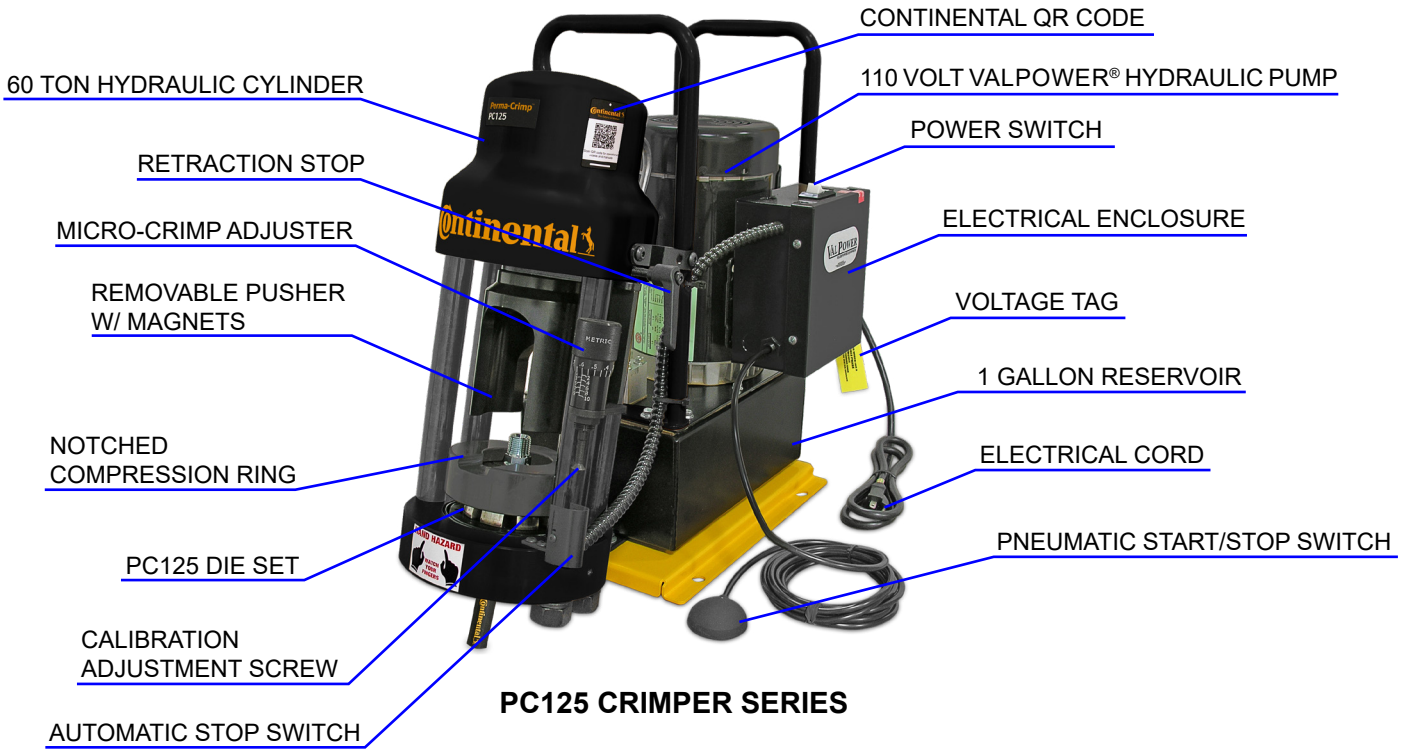
Oil Type----------ISO Viscosity Grade 46

Electric Power Requirement - PC125 Series----------110V-15 Amp

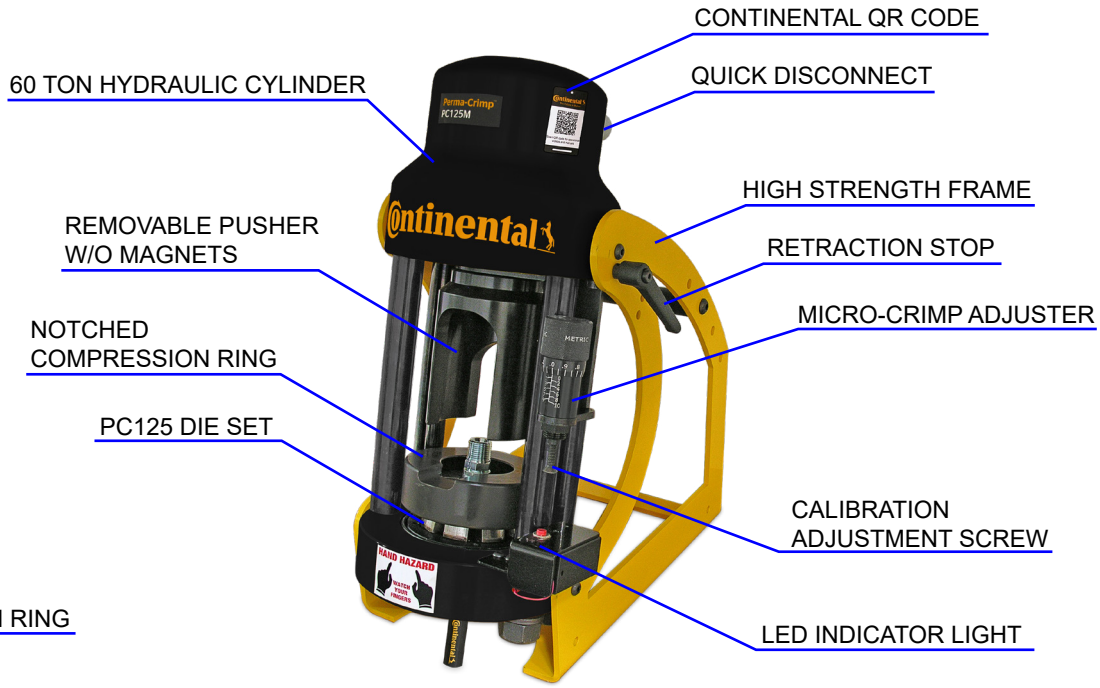
PC125 Crimper Series

PC125M Crimper Series

PC125 / 125M Component Identification



PC125 CRIMPER SERIES



PC125M CRIMPER SERIES

Available Accessories For PC125 / 125M Series Crimpers

Removable Pusher
(Included)
PC125 w/ magnets
PC125M no magnets

Notched Compression Ring
(Included)

Pressure Plate
(Included)

Coupling Stop
(Included only with PC125)

CRIMPX Die Lubricant Oil:
4 oz bottle with dauber cap
(Included)

Die Removal Magnet
(Included)

Vent Plug
(Included)

Metric Micrometer
(Included)

Pneumatic Pendent Switch
(Included)

PC125 Drawer/Stand
(Included only with PC125-Skits Series Crimpers)

Available PC125 Die Series

ValPower® Hand Pump
10,000 psi (Optional)

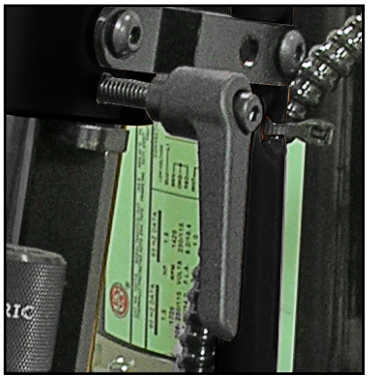
ValPower® Pneumatic Pump
10,000 psi (Optional)

ValPower® Electric Pump (Optional)

MANUAL, PNEUMATIC, AND ELECTRIC POWER SOURCES ARE AVAILABLE FOR THE PC125M CRIMPER SERIES

PC125 / PC125M Features

Micrometer style adjustment permits crimping a wide variety of hose and fittings, and is fully adjustable for a precise crimp.



Adjustable Retraction Stop limits ram retraction to only the amount required to remove the hose and coupling saving time on multiple crimps.

An easily removable Coupling Stop makes repetitive crimps faster by not having to visually align the fitting before each crimp.

Automatic stop switch shuts the pump off when the crimp cycle is complete. (PC125 series only).

Powerful magnets in the pusher retract the notched compression ring with ram on each cycle. This permits the operator to operate the crimper essentially “hands free”. (PC125 series only).

LED Indicator light will warn the operator when the crimp cycle is complete. (PC125M series only).

PC125 / PC125M Quick Start Guide

Follow these steps before using the crimper for the first time.

- Mount the crimper on a sturdy workbench in a well-lit area. Workbench should be able to support the crimper weight of 140 lbs for PC125 and 72 lbs for PC125M.

Note: The PC125 series can be mounted on the PC125 Drawer/Stand and bolted onto the workbench. (See detailed instructions included with PC125 drawer/stand).

- The crimper should be mounted close enough to the edge of the work surface so that hose will not contact the bench or work surface while crimping. There must be enough clearance for the hose to align perpendicular with the cone base, or the dies will not seat properly and the crimps will not be accurate.

- Always check oil level in the PC125 pump, should be 1-1/2 to 2 inches below the vent plug when the cylinder is in the retracted position and should be visible in the sight glass window of the pump reservoir.
- If oil needs to be added use ISO 46 weight hydraulic oil.
- Oil can be drained from the rear oil port of the reservoir.

- If using an optional power unit for the PC125M, follow the manufacturer's recommendation for proper setup and use. A 10,000 psi hose and quick disconnect fitting has been included with the crimper to connect an optional

power unit to the PC125M cylinder port.

- Check to be certain that the shipping plug in the pump reservoir has been replaced with the vent plug shipped with the PC125 crimper.

- Check electrical circuit to be certain that it matches the crimper requirements shown on the voltage tag attached to the crimper cord.
- Plug the PC125 crimper directly into a 110 volt, 15 amp wall outlet.

CAUTION: DO NOT RUN THE CRIMPER ON AN EXTENSION CORD AS LOW VOLTAGE CAN DAMAGE THE MOTOR AND/OR ELECTRICAL COMPONENTS.

PC125 / PC125M Lubrication Procedure

Grease Point # 1
Insert the pressure plate into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange.

Place a thin layer of CrimpX oil (supplied with crimper) or a high pressure molybdenum high pressure grease on the surface the dies sit on (as shown in photo # 1).

Photo # 1

Grease Point # 2
Before sliding the notched compression ring over the correct dies, place a thin layer of CrimpX oil (supplied with crimper) or a high pressure molybdenum high pressure grease on the entire area that dies come in contact with on the inner diameter (as shown in photo # 2).

Photo # 2

If Breaking Die Screws Often: Continue to lubricate / grease as explained above in addition to lubricating each die finger individually (as shown in photo # 3A).

If Notched Compression Ring Sticks: The die fingers must be lubricated on each segment that comes in contact with the notched compression ring (as shown in photo # 3B).

Note: Lubrication is not required before each crimp.
Typical lubrication is after 100 crimps.

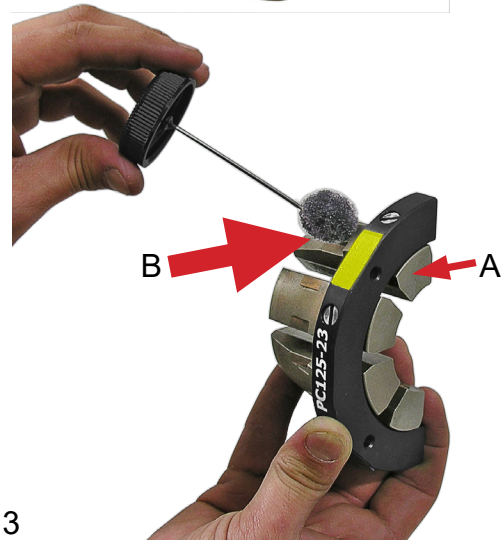


Photo # 3

PC125 / 125M Crimping Procedure

• Follow lubrication procedure prior to crimping procedure.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND NOTCHED COMPRESSION RING COULD RESULT IN THE DIE SET SEIZING IN THE BASE FLANGE.

Step 1: Insert the pressure plate into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange. Make sure is lubricated prior to inserting the die set.

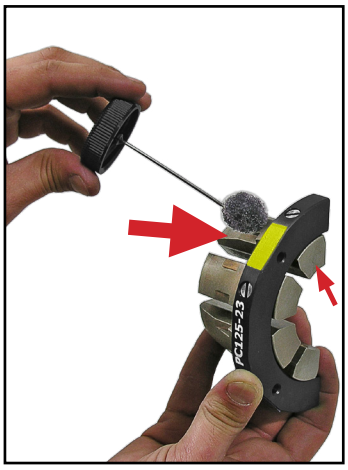
Step 2: Select the correct die set for the combination of hose and fitting being crimped. The correct die set can be found in the Continental ContiTech Crimp Specification Manual. Note that the number etched on the OD of the die ring represents the fully closed diameter of the die set in millimeters. In addition, die sets are color-coded for easier identification.

PC125 and PC125M Dies

ContiTech Part #	Description	Color	ID	ContiTech Part #	Description	Color	ID
20244896	PC125-8.5MM	Black	8.5MM	20244922	PC125-27MM	Brown	27MM
20244897	PC125-12MM	Black	12MM	20244923	PC125-31MM	Silver	31MM
20244898	PC125-14MM	Red	14MM	20244924	PC125-34MM	Purple	34MM
20244899	PC125-16MM	Blue	16MM	20244925	PC125-41MM	Orange	41MM
20244920	PC125-19MM	Green	19MM	20867524	PC125-43MM	Black	43MM
20244921	PC125-23MM	Yellow	23MM	20244927	PC125-50MM	Black	50MM

Step 3: Lubricate the contact surfaces, both bottom and outside edges of the die fingers, with CrimpX oil provided with the crimper. Only use a molybdenum/graphite high-pressure grease applied sparingly to the contact surfaces. Die lubricant can be obtained from customer service using part numbers PC900-grease-3 oz or PC900-grease-1lb. An aerosol lubricant, PC900-aerosol lube, can also be used.

Failure to lubricate the contact surfaces with the correct lubricant will cause the dies to seize in the compression ring, causing damage to the die set as well as possibly damaging the crimper.



Step 4: Place the lubricated die set squarely in the pressure plate.

Step 5: Place the lubricated notched compression ring loosely but evenly over the die set. Make sure die set is correctly aligned.

Note: Notched must face forward.

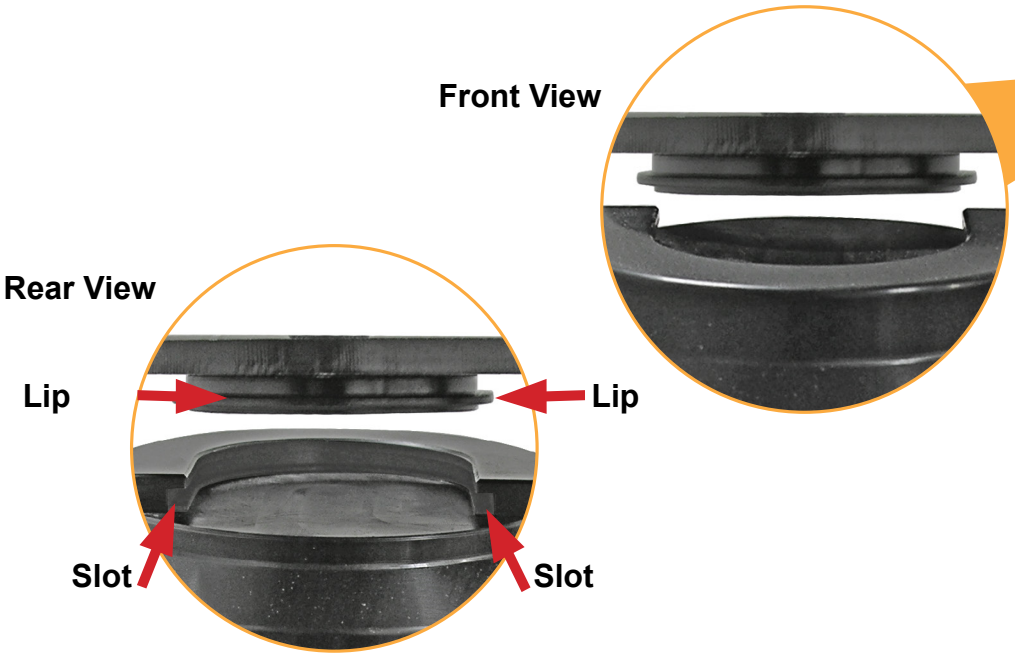
Step 6: Insert the hose and fitting and align the fitting so the ferrule is even with the top surface of the die.

Step 7: Manually depress the notched compression ring, closing the die set until the hose and fitting are held loosely in the die set. Seat the notched compression ring evenly on the die set.

CAUTION: The notches on the die set must be completely covered by the notched compression ring prior to starting the crimp. If the notches are showing, you must go to a larger die set. Crimping with an incorrect die size could result in personal injury.

Step 8: Slide the Pusher onto the pusher retaining ring on the hydraulic cylinder. Make sure slot in pusher goes over lip on pusher retaining pin.

CAUTION: Damage to pusher and retaining pin can occur if misaligned.



Note: Make sure the pusher is positioned correctly as shown.

Step 9: Set the micrometer to the setting as shown in the most current Continental ContiTech Crimp Specification Manual for the combination of hose and fitting being crimped.

The metric micrometer (readings of 0 to 10) is a direct reading micrometer. The setting on the micrometer is added to the number in millimeters etched on the die ring to obtain the final crimp diameter. The adjuster, set at “0,” is the setting for the die set fully closed.

For example, with a 34mm die and the micrometer set at 3.0, the finished crimp diameter would be 37.0mm (34mm + 3.0mm).

Note: Each die set has a limited range of diameters for which a satisfactory crimp can be obtained. Always consult the most current Continental ContiTech Crimp Specification Manual for selecting the correct die set.

Step 10: Recheck the fitting for the correct alignment in the die set and depress the start/stop switch. Hold the start/stop switch until the automatic stop switch shuts the pump off. Release the start/stop switch and allow the pusher to return to the retracted position.

Step 11: For the PC125M with a hand or pneumatic pump, apply pressure to bring the pusher in contact with the notched compression ring until the hose and fitting are held in position with very light pressure. Check to make sure the notched compression ring is evenly placed on the die set and the die set is correctly aligned. Recheck the fitting for alignment.

Step 12: Continue to apply pressure as pusher travels downward, compressing the notched compression ring onto the die set to crimp the coupling. As the micrometer moves down, it will touch the red button and the LED indicator light will turn on to indicate that the crimp is complete, release pressure so the pusher will retract.

Step 13: Check the crimp diameter of the finished assembly with calipers or micrometers, to be certain that it is within the specifications as outlined in the Continental ContiTech Crimp Specification Manual.

Hose Assembly Position

Position fitting into the die set for a “full” length crimp. Fitting hex must be positioned up to but clear of the die during crimp. When crimping T7 and T8 fittings, refer to the Continental ContiTech Crimp Specification Manual for proper positioning of the fitting into the die set.

PC125 Calibration Check

• Follow lubrication procedure prior to calibration check.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND NOTCHED COMPRESSION RING COULD RESULT IN THE DIE SET SEIZING IN THE BASE FLANGE.

• Place the **Pressure Plate**, any **Die Set**, and the **Notched Pressure Ring** in the crimper bottom flange in the order shown.

(A hose and fitting are not required for a calibration check).

• Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

• Set the Micrometer at “0”.

• Depress and hold the **Start/Stop** switch on the PC125 Series until the Die set is completely closed and oil pressure has built up in the hydraulic cylinder.

• If the ram extends, the dies are completely closed, the pump builds pressure (The sound of the pump will change) when the micrometer touched the electronic red button as shown, “count one mississippi” the motor will shut off, and the ram will retract the crimper is correctly calibrated.

• If the above conditions are not met, the crimper requires recalibration, hold the micrometer barrel with a 5/16 inch open end wrench and rotate the stem either in or out with a 5/32 inch hex key wrench.

Note: 1/4 turn of screw will change crimp diameter approximately 0.008"

• Rotating the stem out of the barrel decreases the time required for the pump to shut off.

• Recheck calibration.

PC125M Calibration Check

• Follow lubrication procedure prior to calibration check.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND NOTCHED COMPRESSION RING COULD RESULT IN THE DIE SET SEIZING IN THE BASE FLANGE.

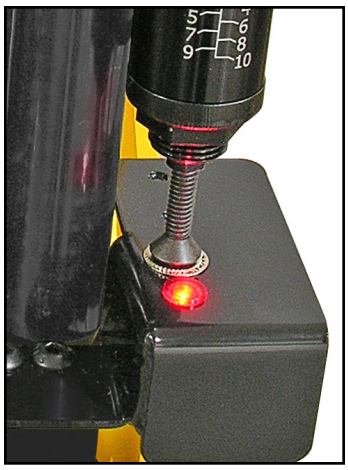
• Place the **Pressure Plate**, any **Die Set**, and the **Notched Pressure Ring** in the crimper bottom flange in the order shown.

(A hose and fitting are not required for a calibration check).

• Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

• Set the Micrometer at “0”.

• Apply pressure to the hand pump or pneumatic pump until the dies are completely closed and pressure has built up in the hydraulic cylinder.



• If the ram extends, the dies are completely closed, the micrometer touched the red button, and the LED indicator light is turned on as shown the crimper is correctly calibrated.

(Release pressure to retract the ram).

Note: If the LED Indicator light becomes faint, replace the (2) AA batteries as needed.

• If the above conditions are not met, the crimper requires recalibration, hold the micrometer barrel with a 5/16 inch open end wrench and rotate the stem either in or out with a 5/32 inch hex key wrench.

Note: 1/4 turn of screw will change crimp diameter approximately 0.008"

• Rotating the stem out of the barrel decreases the ram to retract.

• Recheck calibration.

PC125 Drawer / Stand Assembly

THIS INSTRUCTIONS CAN BE USED FOR

PC125 AND PC125RCD SERIES CRIMPERS.

1

Install (2) 3/8-16 x 1" carriage bolts in front two holes (as shown in picture # 1). Use 3/8" plastic retaining washer to hold bolt into place.

2

Slide the drawer slightly out to access two rear holes (as shown in picture # 2). Install (2) 3/8-16 x 1" carriage bolts in rear two holes (as shown in picture # 2). Use 3/8" plastic retaining washer to hold bolt into place.

3

Place the PC125 base plate over the 4 screws as shown in picture # 3.
Place 3/8" flat washer, 3/8" locking washer, and then the 3/8"- 16 nut over the bolt as shown.

4

Tighten each nut with a 9/16" wrench or socket until the nuts are tight as shown in picture # 4.

Note: Bolt the PC125 crimper stand/drawer assembly to work surface before use.

Troubleshooting

Problem: Crimper will not run at all.

› The white rocker switch is also a circuit breaker. Check to see that the circuit breaker has not been tripped. Check the wall outlet. The crimper comes from the factory wired for a 110V, single phase circuit. Use of extension cords or outlets with inadequate power can damage the motor. Do not run the crimper from a portable power source.

› Check the stop switch mounted to the switch bracket under the micrometer adjuster. This is a normally closed switch; if it does not close, the crimper will not operate. Caution: Do not operate the crimper with this switch bypassed as the pump will not shut off and the brackets can be damaged.

› Check the pneumatically actuated switch in the electrical box, mounted on the motor. This switch controls power to the motor and is actuated with air pressure from the bulb on the end of the hose going into the box.

Problem: Crimp diameter too large.

› Check the calibration and recalibrate if required.

› Incorrect die set is being used. The closed diameter is the die size stamped on the die ring.

› Incorrect setting of the micrometer adjuster. Check the Continental ContiTech Crimp Specification Manual for the correct settings.

› Inadequate pump pressure. Check oil level in the pump. It should be approximately 1-1/2"" below the fill plug. Replenish with ISO viscosity grade 46 hydraulic oil.

› Inadequate lubrication of the dies and compression ring, causing the pump to work harder than normal to reach the required diameter.

› Inadequate pressure being generated by the pump. This is most likely if the crimper can crimp the smaller size hose and not the larger hose. When correctly adjusted, the pump should generate approximately 10,000 psi. Do not adjust the pump to produce in excess of 10,000 psi, as damage to components or personal injury may result.

› No pressure being generated by the pump. There should be a definite change in pitch of the pump as it cycles into high pressure mode and begins to “work” harder.

Problem: Crimp diameter too small.

› Check crimp diameter and recalibrate if necessary.

› Incorrect die being used. Verify the correct die set has been selected.

› Incorrect setting of the micrometer adjuster. Check the Continental ContiTech Crimp Specification Manual for the correct settings.

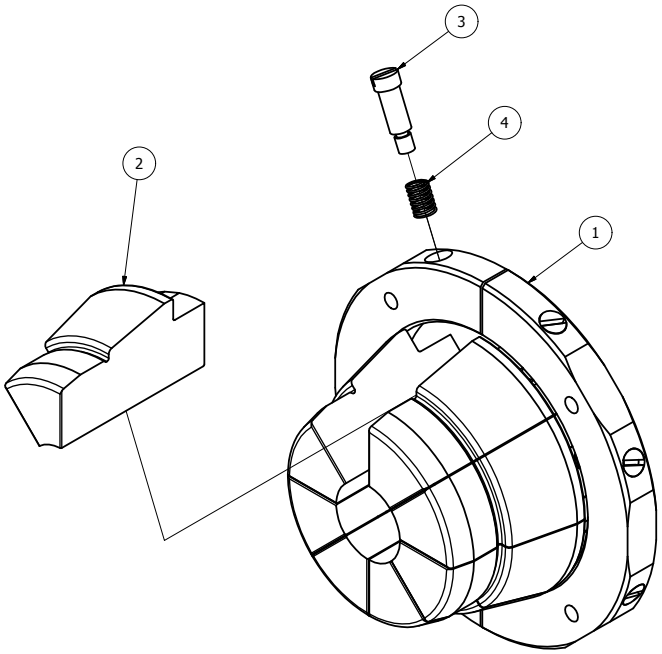
Problem: Dies sticking in the notched compression ring.

› Inadequate lubrication of the notched compression ring and die surfaces.

› Refer to PC125 / PC125M Lubrication Procedure.

Part Numbers

PC125 Die Components	
Item	Description
1)	PC125-Die Ring (Not sold separately)
2)	8 Die fingers
3)	PC125- Die Screw
4)	PC125-Die Spring



PC125 and PC125M Die Rings (Half Only)					
ContiTech Part #	Die Ring Etched	Color	ContiTech Part #	Die Ring Etched	Color
20370778	PC125-8.5MM	Black	20370761	PC125-27MM	Brown
20370778	PC125-12MM	Black	20370762	PC125-31MM	Silver
20370767	PC125-14MM	Red	20370763	PC125-34MM	Purple
20370760	PC125-16MM	Blue	20370765	PC125-41MM	Orange
20370748	PC125-19MM	Green	20918174	PC125-43MM	Black
20370772	PC125-23MM	Yellow	20918176	PC125-50MM	Black

PC125 and PC125M Dies							
ContiTech Part #	Description	Color	ID	ContiTech Part #	Description	Color	ID
20244896	PC125-8.5MM	Black	8.5MM	20244922	PC125-27MM	Brown	27MM
20244897	PC125-12MM	Black	12MM	20244923	PC125-31MM	Silver	31MM
20244898	PC125-14MM	Red	14MM	20244924	PC125-34MM	Purple	34MM
20244899	PC125-16MM	Blue	16MM	20244925	PC125-41MM	Orange	41MM
20244920	PC125-19MM	Green	19MM	20867524	PC125-43MM	Black	43MM
20244921	PC125-23MM	Yellow	23MM	20244927	PC125-50MM	Black	50MM

Part Numbers

PC125 Options	
ContiTech Part #	Description
20244895	PC125 Drawer / Stand

PC125M Pump Options	
ContiTech Part #	Description
20244931	Two Stage hand pump
20244932	Air/hydraulic pump
20244916	1/2 HP, 110V electric pump

Replacement Parts	
ContiTech Part #	Description
20348434	Die ring pusher with magnets for PC125
20551881	Die ring pusher without magnets for PC125M
20395217	Pressure plate for PC125/PC125M
20348513	Notched compression ring for PC125/PC125M
20244945	Start/Stop switch for 1 HP pump
20244936	Adjustable coupling stop for PC125
20370792	White breaker switch for PC125/PC150
20370791	Metric Micrometer for PC125/PC125M
20370790	Red limit switch for PC125/PC150
20291768	Retaining ring for PC125/PC125M pusher
9847K13	Vent plug for PC125
104679	Die removal magnet PC125/PC125M
20708983	CRIMPX die lubricant oil for PC125/PC125M

Industrial Fluid Solutions

Market segment
Hydraulic Hose

Contact
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703 S. Cleveland Massillon Road
Fairlawn, OH 44333-3023 U.S.A.
1-800-235-4632
www.contitech.us

Your local contact
www.contitech.de/contactlocator

Canada
1-888-275-4397

Mexico
1-800-439-7373

Continental. Smart Solutions Beyond Rubber

The ContiTech division of the Continental Corporation is one of the world's leading industry specialists. As a technology partner, our name is synonymous with expertise in development and materials for components made of natural rubber and plastics and also in combination with other materials such as metal, fabrics or silicone. By integrating electronic components, we are also generating solutions for the future.

Beyond products, systems and services, we also provide holistic solutions and have a formative influence on the industrial infrastructure. We see digitalization and current trends as an opportunity to work with our customers to add sustainable value – for both sides and for good.

Rev: 02/27/2020

Continental
The Future in Motion