



D100 PORTABLE SERIES HYDRAULIC CRIMPERS WITH LED INDICATOR LIGHT OPERATORS MANUAL



SAFETY PRECAUTIONS



- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING CRIMPER.
- D100 SERIES CRIMPERS CAN PRODUCE 35 TONS OF CRIMPING FORCE.
- KEEP BOTH HANDS AWAY FROM PINCH POINTS.
- CONSULT HOSE AND FITTING MANUFACTURER FOR CORRECT MACHINE SETTINGS AND CRIMP MEASUREMENTS.
- ALWAYS WEAR EYE PROTECTION.

MODELS COVERED

- This manual is applicable to different versions of the D100 Portable Series Crimpers such as D100P, D100H, D100-SP, D100-SH, and D101S.
- "Standard", "Metric" and "DC" Micrometer Style Adjustment is available on different models.
- Lubrication, Crimping, Calibration and Repair procedures are similar for all models.

TABLE OF CONTENT

SAFETY PRECAUTIONS	2
BULLETIN MICRO-CRIMP SIGHT INDICATOR / LED INDICATOR LIGHT SERIES	4
HOW TO REPLACE THE LED INDICATOR LIGHT BATTERIES	5
D100S COMPONENT PARTS & TECHNICAL DATA	6
D100H / D100P COMPONENT PARTS & TECHNICAL DATA	7
FEATURES	8
INITIAL SET UP	9
LUBRICATION PROCEDURE	10
CRIMPING PROCEDURE	11
CALIBRATION CHECK PROCEDURE	17
INCLUDED ACCESSORIES	20
AVAILABLE ACCESSORIES	21
TROUBLESHOOTING	22
COMPONENT PARTS BREAKDOWN	23
CUSTOM CRIMP® "NO-NONSENSE" WARRANTY STATEMENT	30
CUSTOM CRIMP® CONTACT INFORMATION	31



BULLETIN: D100S series crimpers with Micro-Crimp Sight Indicator button have been upgraded with LED Indicator Light.



D100S SERIES CRIMPER WITH MICRO-CRIMP SIGHT INDICATOR BUTTON

STYLE: MICRO-CRIMP SIGHT INDICATOR BUTTON

CRIMPING PROCEDURE:

- · Place the lubricated pressure plate into the bottom flange.
- Place the lubricated die set in the pressure plate.
- Align the fitting in the die set.
- Place the lubricated compression cone over the die set.
- Slide the pusher onto the pusher retaining ring on the hydraulic cylinder.
- · Set the Micro-Crimp Adjuster to the setting desired.
- Apply pressure to the (Hand or Pneumatic Pump) until the Micro-Crimp sight indicator button is just visible.
- Release pressure so the pusher will retract.
- Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.



UPGRADED WITH LED INDICATOR LIGHT

STYLE: LED INDICATOR LIGHT

CRIMPING PROCEDURE:

- · Place the lubricated pressure plate into the bottom flange.
- · Place the lubricated die set in the pressure plate.
- · Align the fitting in the die set.
- Place the lubricated compression cone over the die set.
- Slide the pusher onto the pusher retaining ring on the hydraulic cylinder.
- · Set the Micro-Crimp Adjuster to the setting desired.
- Apply pressure to the (Hand or Pneumatic Pump) until the LED Indicator Light turns on.
- Release pressure so the pusher will retract.
- Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.

FEATURES:

- Visual RED LED Indicator Light turned on, to indicate the crimp is complete.
- · No other adjustment than the Micrometer.
- Takes guesswork out of the crimping process.

HOW TO REPLACE THE LED INDICATOR LIGHT BATTERIES





The LED Indicator Light beginning to diminish.







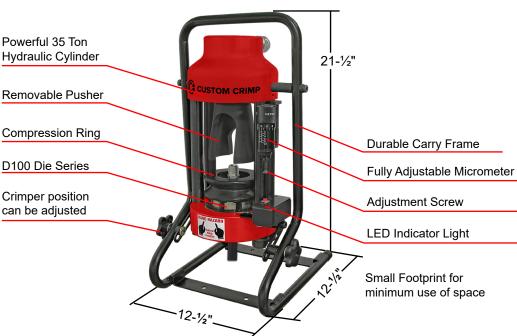


Note: If the LED Indicator Light becomes diminish/weak/and or if the LED indicator does not light up, replace the (2) AA batteries as needed.

- 1. Use a # 0 Phillip-head screwdriver, to remove the screw.
- 2. Slide the cover towards the back to remove it.
- 3. Replace the (2) AA batteries.
- 4. Slide the cover towards the front until it locks into place, and secure it with the screw.



D100S COMPONENT PARTS & TECHNICAL DATA



D100S Technical Specifications

Crimping Force: 35 Ton

Hydraulic Hose Capacity: 2 Wire = 1 "

4 Spiral = 3/4"

Crimper Size: L: 12-1/2" x W: 12-1/2" x H: 21-1/2"

Crimper Weight: 38 lbs

Micrometer Style Adjustment: Metric

Die Series: D100

Available ValPower® Pumps:

Hand Pump (10,000 psi) Pneumatic Pump (10,000 psi) Multi-Electric Pump (1hp/110v)



D100-SH Series Crimpers

PERFORMANCE SPECIFICATIONS		
Pump Model	VHP-10-25	
Reservoir Capacity	25 in³ (410cc)	
Weight	8 Lb (3.6 Kg)	
Max Hydraulic Pressure	10,000 psi (680 bar)	
Low Pressure Flow	.35 in³ per stroke	
High Pressure Flow	.07 in ³ per stroke	
Maximum Handle Effort	100 Lb (45 Kg)	



D100-SP Series Crimpers

PERFORMANCE SPECIFICATIONS		
Pump Model	VAP-10-100	
Reservoir Capacity	100 cu in (1,639 cc)	
Weight	20 Lb (9 Kg)	
Flow @ 0 psi	70 in ³ /min	
Flow @ 5,000 psi	23 in ³ /min	
Flow @ 10,000 psi	6 in³/min	
Required air pressure @ 10,000 psi	85 psi	

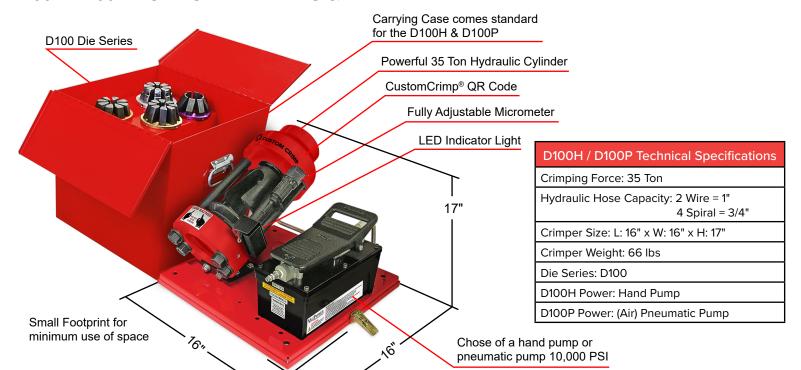


D101S Series Crimpers

PERFORMANCE SPECIFICATIONS	
Pump Model	1HP Pump
Power	110 Volts / Single Phase/15 Amp
Oil Type	ISO 46 Hydraulic Oil
Reservoir Capacity	1 Gallon



D100H/D100P COMPONENT PARTS & TECHNICAL DATA





D100H Series Crimpers

PERFORMANCE SPECIFICATIONS		
Pump Model	VHP-10-25	
Reservoir Capacity	25 in³ (410cc)	
Weight	8 Lb (3.6 Kg)	
Max Hydraulic Pressure	10,000 psi (680 bar)	
Low Pressure Flow	.35 in³ per stroke	
High Pressure Flow	.07 in ³ per stroke	
Maximum Handle Effort	100 Lb (45 Kg)	

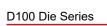


D100P Series Crimpers

PERFORMANCE SPECIFICATIONS		
Pump Model	VAP-10-100	
Reservoir Capacity	100 cu in (1,639 cc)	
Weight	20 Lb (9 Kg)	
Flow @ 0 psi	70 in³/min	
Flow @ 5,000 psi	23 in ³ /min	
Flow @ 10,000 psi	6 in³/min	
Required air pressure @ 10,000 psi	85 psi	

D100/D105 Series Pusher

D100/D105 Series Compression Ring



D100/D105 Series Pressure Plate





FEATURES



D100S portable series weighing in at 38 lbs and mounted on a lightweight tubular frame, with 35 tons of crimping force this crimper can be carried to almost any location where service is required.



Crimper position can be adjusted for optimum crimping position or dropped to vertical position for better balance when the crimper is being carried.



Open design, two piece "slide in" die set and removable pusher allows the operator to accurately position the fitting prior to crimping.



Micrometer with "Micro-Crimp Adjuster" is fully adjustable to make precise and repeatable crimps.



LED indicator light will turn on to indicate that the crimp is complete.





Easy calibration adjustment to increase or decrease crimp OD.



INITIAL SET UP

FOLLOW THESE STEPS <u>BEFORE</u> YOU USE THE CRIMPER FOR THE FIRST TIME.

The D100 Portable Series hydraulic hose crimpers paired with either a ValPower® Hand Pump, Pneumatic Pump or Electric Pump make the perfect combination for portable crimping requirements. The D100S portable crimper weighing only 38 lbs and mounted on a convenient carrying frame, and the D100H / D100P portable crimpers weighing only 75 lbs with 35 tons of crimping force can be carried to almost any location where service is required.

- If the D100S or D100H / D100P series crimpers are going to be used in the shop is recommended to mount the crimper on a sturdy workbench in a well-lit area. Workbench should be able to support the crimper, pump, and components weight.
- 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.
- Manual Pump 10,000 psi, Pneumatic Pump 10,000 psi or Electric Pump 1HP motor 110V single phase 15 AMP, ValPower® offers rugged industrial duty hydraulic power units that will meet the demanding requirements of industrial users. Both manual and air pumps have aluminum reservoirs and all electric models have steel reservoirs to withstand the temperature and service conditions of industrial use.
- A 10,000 psi hose and quick disconnect fitting has been included with the crimper to connect to any of the ValPower® optional power units to the D100S cylinder port.
- For the D100P / D100H series crimpers comes with a 10,000 psi assembly line connected to the pneumatic or hand pump to the cylinder port.









LUBRICATION PROCEDURE

Grease Point # 1

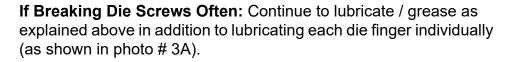
Insert the pressure plate into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange.



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).

Grease Point #2

Before sliding the compression ring over the correct die set, 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).



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

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



Photo #1



Photo #2

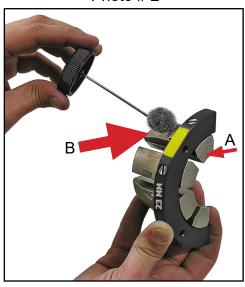


Photo #3

Note: Follow the lubrication procedure prior to crimping procedure.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND 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.

Note: Consult your hose and fitting manufacturer for the correct die size for the combination of hose and fitting being crimped.

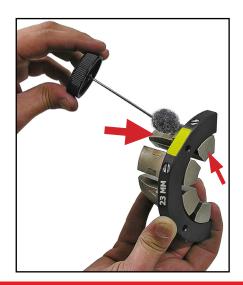
Note: The number etched on the OD of the die ring represents the fully closed diameter of the die set in millimeters. In addition, die sets are color-coded for easier identification.



Step 3: Lubricate the contact surfaces, both bottom and outside edges of the die fingers, with CrimpX oil (supplied with crimper) or a high pressure molybdenum high pressure grease.

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: Align the fitting in the die set according to the hose and fitting manufacturer's recommendation.



Step 6: Place the lubricated compression ring over the die set and compress the die set by hand to hold the hose and fitting in place.



Note: Make sure the compression ring is seated evenly on the die set.







CAUTION: The notches on the die set must be completely covered by the compression ring prior to starting the crimp.

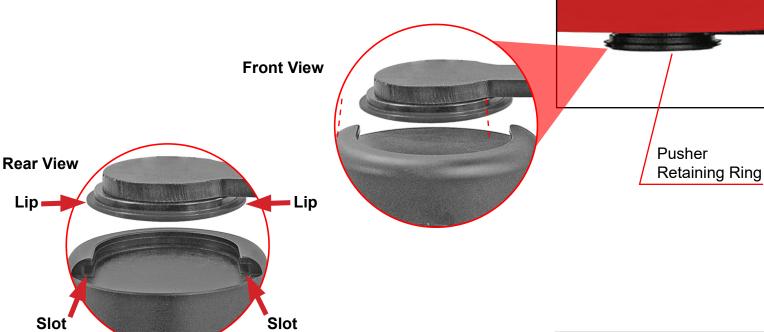
- If the notches are showing, you must go to a larger die set.
- Crimping with an incorrect die size could result in personal injury.



Step 7: Slide the Pusher onto the pusher retaining ring on the hydraulic cylinder.

Note: Make sure slot in pusher goes over lip on pusher retaining ring.

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



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



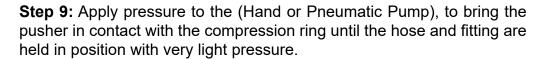
CUSTOM CRIM

Step 8: Set the Micro-Crimp Adjuster to the setting recommended by the hose and fitting manufacturer for the combination of hose and fitting being crimped.

NOTE: The Metric Micro-Crimp Adjuster is a direct reading micrometer. Add the setting on the micrometer to the closed diameter of the die set to obtain the finished crimp diameter.

For example: With a 23mm die set and the Micro-Crimp Adjuster set at 3.0, the finished crimp diameter would be 26.0 mm (23mm + 3.0mm).

Note: Each die set has a limited range of diameters for which a satisfactory crimp can be obtained. Always consult your hose and fitting manufacturer for the correct die set for the hose and fitting being crimped.



- 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 10: Continue to apply pressure as pusher travels downward, compressing the 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 11: Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.

Note: Always consult with your hose and fitting manufacturer to obtain the must current crimp specifications.





CALIBRATION CHECK PROCEDURE

THE CRIMPER IS CALIBRATED PRIOR TO SHIPMENT, BUT A CALIBRATION CHECK IS RECOMMENDED PRIOR TO USING THE CRIMPER FOR THE FIRST TIME.

Note: Follow the lubrication procedure prior to calibration check.

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

Step 1: Place the **Lubricated Pressure Plate**, into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange.





Step 2: Place **Any Lubricated Die Set** squarely in the pressure plate.



Note: Make sure the compression ring is seated evenly on the die set.

Note: A hose and fitting are not required for a calibration check.



CALIBRATION CHECK PROCEDURE

Step 4: Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

Note: Make sure slot in pusher goes over lip on pusher retaining ring. Refer to page 12 for details if needed.

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



Step 5: Set the **Metric Micro-Crimp Adjuster** at "0".

Note: Set the Micro-Crimp Adjuster at "100" for the Standard Micrometer. Set the Micro-Crimp Adjuster at "95" for the DC Micrometer.



Step 6: Apply pressure to the (Hand or Pneumatic Pump), to bring the pusher in contact with the compression ring.



CALIBRATION CHECK PROCEDURE

Step 7: Continue to apply pressure, 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 so the pusher will retract.

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





Step 8: 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.





CUSTOM CRIMP

Innovating SMART Hose Assembly Solutions Since 1979

INCLUDED ACCESSORIES



Metric Micrometer P/N:101587



D100/D105 Series Pusher P/N:100813



D100/D105 Series Compression Ring P/N:100849



D100/D105 Series Pressure Plate P/N:100869



(5) D100 Screws P/N:EN84-115 (Sold individually)



(5) D100 Spring P/N:LC 022D 01 (Sold individually)



3/8 Quick Disconnect Female Installed (D100S Series Only)



10,000 psi Hose Assembly W/ 3/8 Quick Connect Male Tip (D100S Series Only)



CRIMPX Die Lubricant Oil: 4 oz bottle with dauber cap P/N:103886



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AVAILABLE ACCESSORIES



Standard Micrometer P/N:100628



DC Micrometer P/N:101489



ValPower® Hand Pump 10,000 psi P/N:VHP-10-25



ValPower® Pneumatic Pump 10,000 psi P/N:VAP-10-100



ValPower® Multi-Electric Pump



D100/D105 Notched Compression Ring P/N:101190



D165 Coupling Stop P/N:100954



Die Storage Shelf P/N:101431



Die Removal Magnet P/N:104679



CRIMPX Die Lubricant: Grease 4 oz can with brush P/N:104162



CustomCrimp® Notched Digital Caliper IN/MM P/N:CC-Caliper



D100 Series Die Rings Refer to page 21 for more details

TROUBLESHOOTING

PROBLEM: CRIMP DIAMETER TOO LARGE

- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.
 (NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may need to be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used. Each die has a useable range of approximately 3mm (.120 in) above the closed diameter of the die. The closed diameter is the die size stamped on the die ring.
- Check crimper calibration and re-calibrate if required.
- Inadequate pump pressure. Check oil level in the pump.
- 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. Use only the crimpx oil / grease shipped with the machine or a high pressure molybdenum high pressure grease (equivalent).
- Inadequate pressure being generated by the pump. This is most likely if the crimper can crimp the smaller size hoses and not the larger hoses. When correctly adjusted, the pump should generate approximately 10,000 psi.

 Do Not adjust 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

- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.

 (NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used (See die range under Crimp Diameter Too Large).
- Check crimp diameter and re-calibrate if necessary.

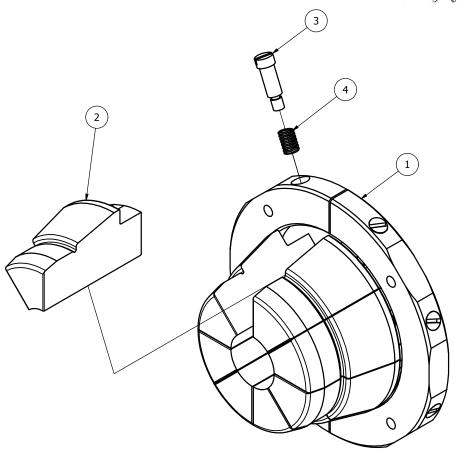
PROBLEM: DIES STICKING IN COMPRESSION RING

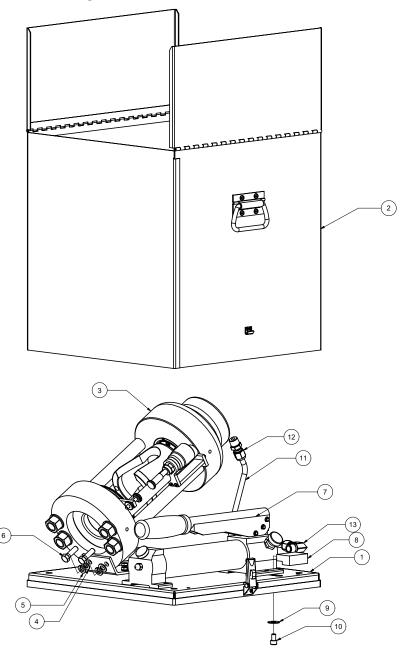
- Inadequate lubrication of the compression ring and die surfaces. Use only the crimpx oil / grease shipped with the crimper or a high pressure molybdenum high pressure grease (equivalent).
- Refer to Lubrication Procedure for more details.

	D100 SERIES DIE PARTS (AI-100724)			
ITEM	PART NUMBER	DESCRIPTION	QTY	
1	101065-COLOR	DIE RING HALF D100 SERIES	2	
2	VARIES WITH THE DIE SIZE	8 PC DIE FINGER SET	8	
3	EN84-115	D100 SCREW	8	
4	LC 022D 01	D100 SPRING	8	

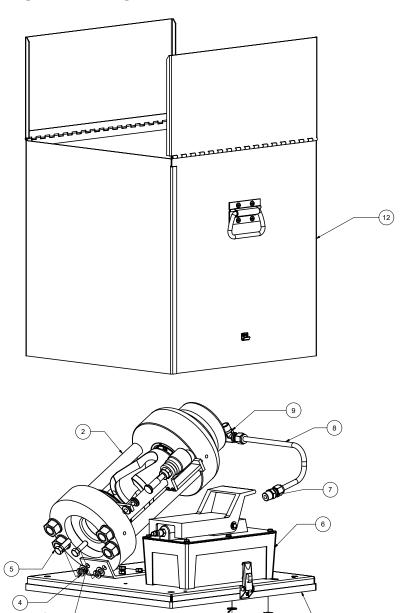
DIE RING	DIE RING HALF D100 SERIES		
PART NUMBER	DESCRIPTION		
101065-BLACK	DIE RING HALF BLACK		
101065-BLUE	DIE RING HALF BLUE		
101065-BROWN	DIE RING HALF BROWN		
101065-GREEN	DIE RING HALF GREEN		
101065-ORANGE	DIE RING HALF ORANGE		
101065-PURPLE	DIE RING HALF PURPLE		
101065-RED	DIE RING HALF RED		
101035-SILVER	DIE RING HALF SILVER		
101065-YELLOW	DIE RING HALF YELLOW		



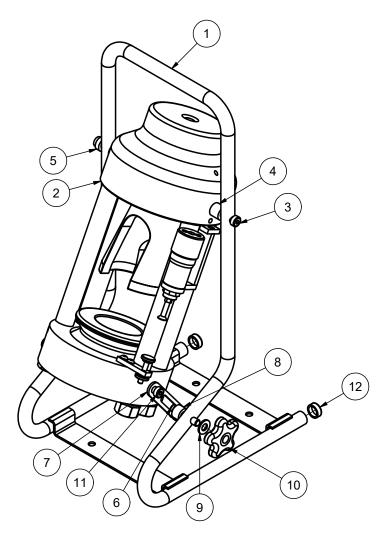




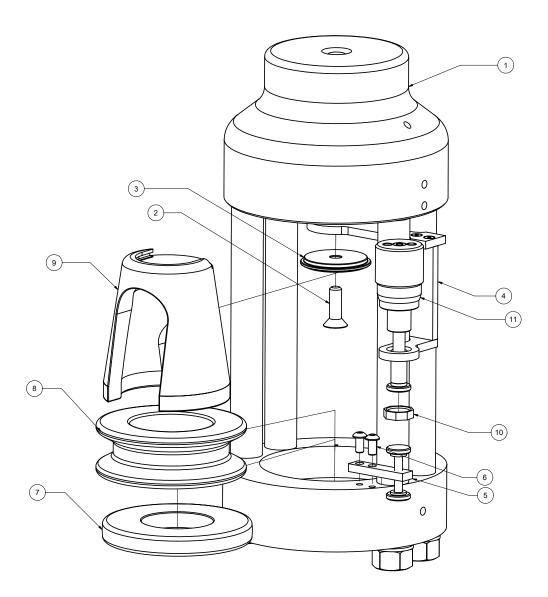
D100H Assembly (100935)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	100930	Base Assembly	1
2	100931	Cover Assembly	1
3	100929	D100 Head Assembly	1
4	90126A031	3/8 Plain Washer	2
5	91102A031	3/8 Lock Washer	2
6	92865A626	3/8-16 x 1 1/4 Hex Bolt	2
7	100934	Hand Pump Assembly	1
8	100338	Hand Pump Clamp	2
9	91090A111	5/16 Plain Washer	2
10	91251A578	5/16-18 x 1/2 SHCS	2
11	100935-01	Hand Pump Tube	1
12	52215K624	Straight Comp Fitting	1
13	52215K634	Elbow Comp Fitting	1



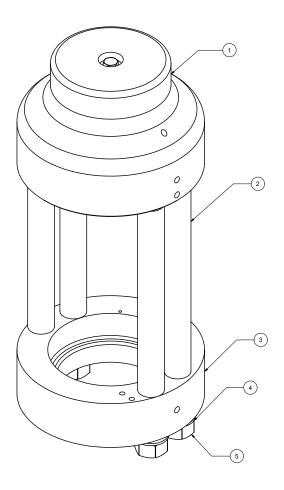
	D100P Assembly (100937)		
ITEM	PART NUMBER	DESCRIPTION	QTY
1	100930	Base Assembly	1
2	100929	Head Assembly	1
3	90126A031	3/8 Plain Washer	2
4	91102A031	3/8 Lock Washer	2
5	92865A626	3/8-16 x 1 1/4 Hex Bolt	2
6	100620	Pneumatic Pump	1
7	52215K624	Straight Comp Fitting	1
8	100620-01	Pneumatic Pump Tube	1
9	52215K634	Elbow Comp Fitting	1
10	90108A029	1/4 Plain Washer	2
11	91251A537	1/4-20 x 1/2 SHCS	2
12	100931	Cover Assembly	1



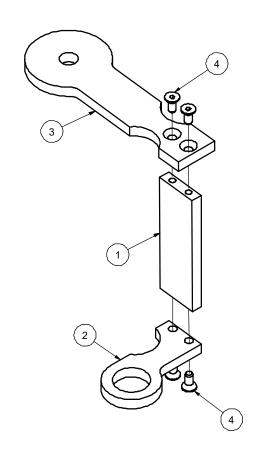
	D100S Portable Crimper Assembly (101013)		
Item	Part Number	Description	Qty
1	100905	D100 Crimper Frame	1
2	100929	D100 Head Assembly	1
3	91259A628	3/8 x 2 Shoulder Screw	2
4	101040	3/8 x 3/4 x 5/8 Spacer	2
5	100956	3/8 x 3/4 x 1/4 Spacer	1
6	93548A628	3/8-16 x 2 1/2 Carriage Bolt	2
7	100980	Adjustment Arm	2
8	101041	3/8 x 3/4 x 3/4 Spacer	2
9	WS23556	3/8 Flat Washer	2
10	DK-186	Angle Adjustment Knob	2
11	91259617	3/8 x 3/8 Shoulder Screw	2
12	940528133	Plastic Cap	2



	D100 H	ead Assembly (100929)	
ITEM	PART NUMBER	DESCRIPTION	QTY
1	101209	35-Ton Head Sub-Assembly	1
2	91253A624	3/8-16 x 1 HSFHS	1
3	100812	Pusher Retaining Pin	1
4	101788	Micrometer Mount Assembly	1
5	100898-04	Micro Pad Assembly	1
6	91255A537	1/4-20 x 1/2 BHCS	2
7	100869	Pressure Plate	1
8	100849	Compression Cone	1
9	100813	Pusher (No Magnets)	1
10	100727	Micrometer Nut	1
11	100628	Standard Micrometer Assembly	1
12	101489	DC Micrometer Assembly	1
13	101587	Metric Micrometer Assembly	1

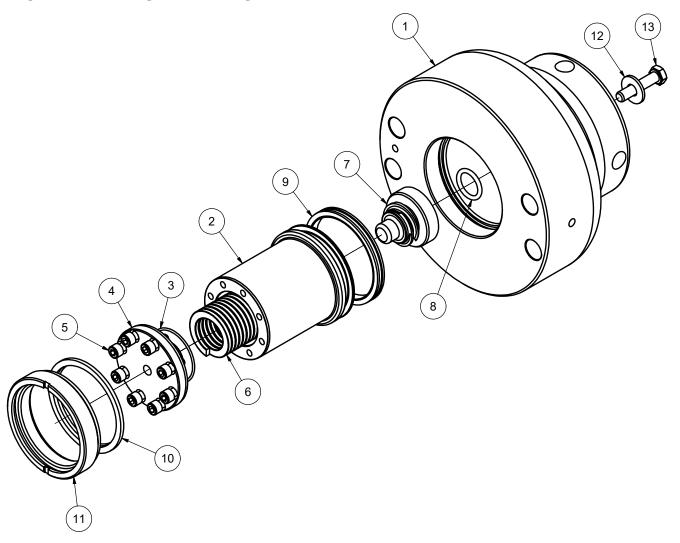


35-Ton Head Sub-Assembly (101209)					
ITEM	PART NUMBER	DESCRIPTION	QTY		
1	103122	35-Ton Cylinder/Flange	1		
2	100329	Strain Rod - 8 1/2"	4		
3	100325	Bottom Flange	1		
4	750SPCL	3/4 Flat Washer - Special	4		
5	95462A538	3/4-10 Hex Nut	4		



D105 Micrometer Mount Assembly (101788)						
Part Number	Description	Qty				
100898-01	Micrometer Arm	1				
100898-02	Micrometer Base	1				
100898-03	Micrometer Suspension Flange	1				
91253A189	8-32 x 1/4 HSFHS	4				
	Part Number 100898-01 100898-02 100898-03	Part Number Description 100898-01 Micrometer Arm 100898-02 Micrometer Base 100898-03 Micrometer Suspension Flange				





35 Ton Cylinder / Flange Assembly (103122)					
ITEM	PART NUMBER	DESCRIPTION	QTY		
1	102511	Cylinder Body	1		
2	101515	Cylinder Piston	1		
3	030D90	030 Disogrin O-Ring	1		
4	100689	Cylinder Piston Cap	1		
5	91251A539	1/4-20 X 5/8 SHCS	8		
6	101282	Cylinder Spring	1		
7	101516	Spring Plug	1		
8	210D90	210 Disogrin O-Ring	1		
9	TP032	T-Seal	1		
10	SH959-26	Ram Wiper	1		
11	101514	Cylinder Retaining Ring	1		
12	90108A415	5/16 Flat Washer	1		
13	92865A587	5/16-18 x 1.50 HHCS	1		



Custom Crimp® "No-Nonsense" Warranty Statement

All Custom Crimp® Products are warranted to be free of defects in workmanship and materials for one year from the date of installation. This warranty ends when the product becomes unusable for reasons other than defects in workmanship or material.

Any Custom Crimp® Product proven to be defective in workmanship or material will be repaired or replaced at no charge. To obtain benefits of this warranty, first, contact Warranty Repair Department at Custom Machining Services at **(219) 462-6128** and then deliver via prepaid transportation the complete hydraulic product to:

ATTN: WARRANTY REPAIR DEPT. Custom Machining Services, Inc. 318 North Co. Rd 400 East Valparaiso IN 46383

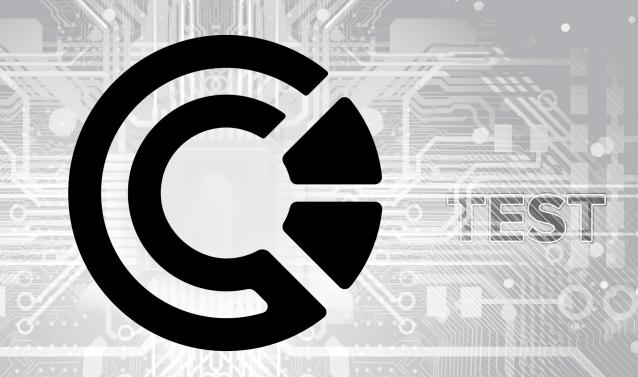
If any product or part manufactured by Custom Crimp® is found to be defective by Custom Crimp®, at its option, Custom Crimp® will either repair or replace the defective part or product and return via ground transportation, freight prepaid.

Custom Crimp® will not cover any incoming or outgoing freight charges for machines sold outside The United States.

This warranty does not cover any product or part which is worn out, abused, altered, used for a purpose other than for which it was intended, or used in a manner which was inconsistent with any instructions regarding its use.

Electric motors are separately warranted by their manufacturer under the conditions stated in their separate warranty.





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