

3" UC-3000 ***(76.2 mm)***

“Ultra-Chuck®”

Durable Lightweight

Air Inflated Bladder

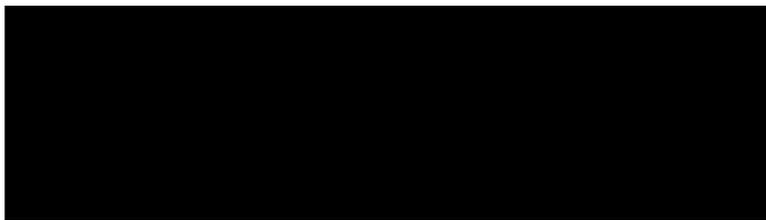
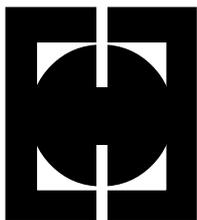
**Chuck Operation/Repair
Manual**



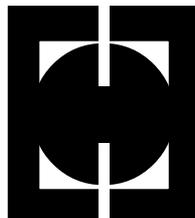
DOUBLE E COMPANY, INC.

319 Manley Street, West Bridgewater, MA 02379 U.S.A.

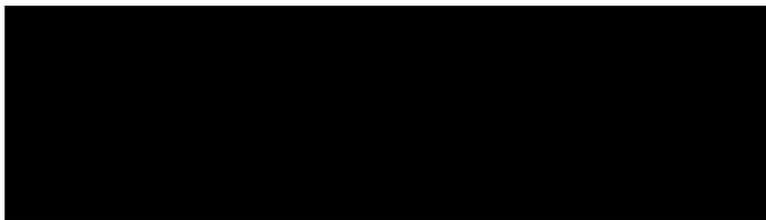
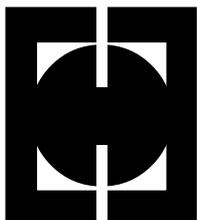
Tel: (508) 588-8099 / Fax: (508) 580-2915

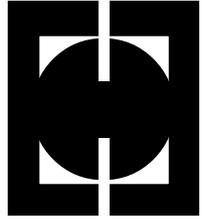


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I. Introduction

The purpose of this operation/repair manual is to help insure the long-lasting, high performance operation of Double E Company 3" (76 mm) UC-3000 Bladder Core Chucks.

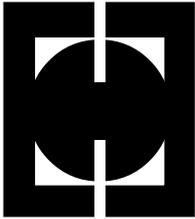
NOTE: For larger size bladder chucks, which differ in construction, use the corresponding repair manual.

This manual is valuable to technicians, maintenance supervisors, and parts managers. The information includes descriptions of spare parts and materials, as well as instructions for operation and repair.

II. Materials, Spare Parts, and Accessories

A. MATERIALS

1. High Strength Thread Adhesive; "Loctite No. 277" (RED) or equivalent.
2. High Performance Pipe Sealant; "Loctite No. 59321" (Teflon Paste) or equivalent.
3. Flexible Adhesive; "Loctite Black-Max™ 380".



SPARE PARTS & ACCESSORIES

B. SPARE PARTS

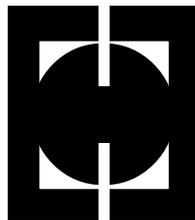
NOTE: Refer to the 3" UC-3000 Assembly Drawing (centerfold) for general reference and part nomenclature.

1. **Spare Chuck(s);** Such will minimize down-time and will allow time to order parts not in stock.
2. Valve(s); Tank Valves; Double E Part No. B-12901. or Tire Valves; Double E Part No. 999-600-0003 (Refer to Section **III**, subsection **D**).
3. Bladders (3"); Double E Part No. C-112860.
4. Clamping Screws for 3" Chucks (M10-1.5 x 30 mm LG. SHCS); Double E Part No. 999-402-1305.

C. ACCESSORIES

1. Air Gun Assemblies (Refer to Section **III**, subsection **D**).
 - a. For chucks with a standard Tire Valve, select Double E Part No. B-14157-1 (inflator gauge with Hose and Tire Inflating Air Chuck).
 - b. For chucks with a Tank Valve, select Double E Part No. B-14157-2 (inflator gauge with Steel Pipe and Polyurethane Tip).
2. Replacement Polyurethane Tip; Double E Part No. A-112906 (Custom replacement tip with 1/8" M.P.T.).
3. Steel Pipe; Double E Part No. B-113512.
4. Hose with Tire Inflating Air Chuck; Double E Part No. 999-752-0002.

OPERATION INSTRUCTIONS



III. Operation Instructions

A. PRODUCT DESCRIPTION

1. The standard 3" Double E Company Bladder Chuck (UC-3000) is a medium-duty, lightweight, air expandable, through-shaft mounted core chuck. It is capable of handling unwind and rewind applications, including surface brake or surface drive.

NOTE: Refer to the Centerfold for dimensions and the Specification Sheet on page **13** for load capacities.

2. For special applications, including shaftless mounting, contact the Double E Company at (508) 588-8099.

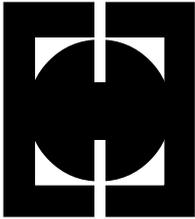
B. APPLICATION LIMITATIONS

1. The maximum bore size for the 3" UC-3000 is 2.250" (57.15 mm) diameter.

NOTE: All chucks are bored .010/.015" (.25/.38 mm) larger than specified through-shaft size. Refer to the 3" UC-3000 Ass'y. Drawing (centerfold) for dimensions.

2. The maximum roll-weight for the 3" UC-3000 is 800 lb. (364 kg).
3. The maximum torque for the 3" UC-3000 is 1200 In.-lb. (135 newton meters).

CAUTION: If the maximum torque is exceeded, including during "emergency stop" conditions, the bladder may be damaged. Refer to the Specification

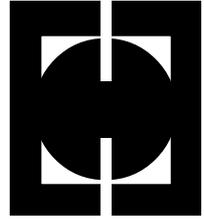


APPLICATION LIMITATIONS

- Sheet on page **13** for load capacities. Also, maximum torque can only be achieved with a FULLY INFLATED BLADDER.
4. The 3" UC-3000 is designed for fiber (paper) cores ranging in actual inside diameter from 3.00" (76 mm) to 3.07" (78 mm). Improved performance (concentricity and bladder life) results if the inside diameter of the core is a maximum of 3.03" (77 mm). Plastic, steel, aluminum, or composite cores of the inside diameters indicated above may be used, but the inside surface must be free from sharp edges and burrs to avoid bladder damage.
 5. When using a 3" UC-3000 with cores that are longer than 11" (279.4 mm), an idler to support the non-chuck end is required. Idlers are available from Double E. When using a 3" UC-3000 with cores which are shorter than 7" (178 mm) in length, an extra-short, special UC-3000 is required. Contact the Double E Company Customer Service Department for dimensional options. Otherwise, as an option, a "dummy" core may be used to cover the unused bladder length.

CAUTION: The bladder must be covered by core(s) across its total length to insure safe inflation. **SERIOUS DAMAGE MAY RESULT.**

MOUNTING ON A THROUGH-SHAFT



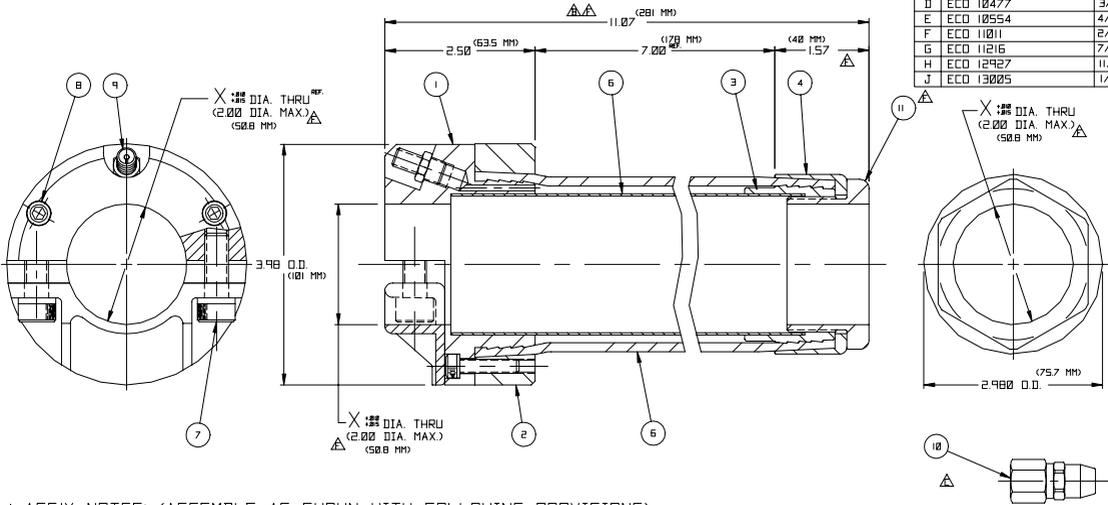
C. MOUNTING ON A THROUGH-SHAFT

1. Determine the desired configuration. Normally, one chuck and one idler per roll is used.
2. Slide the core chuck and idler onto the shaft to the desired positions (loosen clamping screws if necessary). The position of the chucks will correspond to the roll location.
3. For the chuck, tighten the two socket head cap screws to achieve approximately equal space on both sides of the flange. Tighten screws with an 8 mm hex wrench, preferably the "Tee" handle style, at approximately 35 ft. lb. of torque.
4. For the idler, if supplied by Double E, either tighten the two socket head cap screws to achieve approximately equal space on both sides of the flange or tighten the four brass tipped socket set screws. Tighten screws with an 8 mm hex wrench, preferably the "Tee" handle style, at approximately 15 ft. lb. of torque.

D. INFLATION

1. With the chuck-shaft assembly **APPROPRIATELY INSERTED WITHIN THE CORE**, fully inflate the chuck. Double E recommends the use of tire type valves for most effective inflation. If necessary, for standardization and/or operator preference, funnel type

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	1st ISSUE CRN 0310	6/9/94	H.HOPE
B	ECO 10175	7/27/94	H.HOPE
C	ECO 10319	11/8/94	H.HOPE
D	ECO 10477	3/2/95	H.HOPE
E	ECO 10554	4/19/95	H.HOPE
F	ECO 11011	8/13/96	H.HOPE
G	ECO 11216	7/10/96	H.HOPE
H	ECO 12927	11/6/98	
J	ECO 13005	1/8/99	



△ ASS'Y NOTES: (ASSEMBLE AS SHOWN WITH FOLLOWING PROVISIONS)

1. BODY BARBS MUST BE CLEAN & DRY. STRETCH BLADDER INTO POSITION
2. APPLY DOUBLE LOCTITE TO M6 SCREWS & DRAW COMPRESSION RING INTO POSITION
3. POSITION END CAP ONTO BLADDER & INSTALL HEX PLUG AS SHOWN (NO SEALANT)
4. INSTALL VALVE WITH TEFLON TAPE
5. INSTALL M10 SCREWS WITHOUT THREAD ADHESIVE
6. INSPECT FOR "X" BORE & PRESSURE TEST (WITH METAL CORE) FOR LEAKS

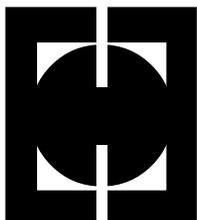
NOTES:

1. THIS DRAWING IS THE PROPERTY OF THE DOUBLE E CO INC. ALL RIGHTS RESERVED.
2. ACTUAL HEIGHT OF ASSEMBLY IS 6 LBS (WITH 2.00 DIA. BORE)
3. ALL PARENTHETICAL DIM'S ARE IN MILLIMETERS.

REF: C 63W1-X (EXTRA SHORT), C 63Y1-X (SHORT)

ITEM	QTY	PART NO	DESCRIPTION	REV.	△	△
11	1	B 115722-X	HEX PLUG	A	△	
10	1	112-101723-B	AIR CHUCK	-	△	
REF	1	B 14854-X	BODY ASSY	B		
9	1	999-600-0003	TIRE VALVE	-		
8	3	999-402-1155	M6-X 25 MM LG SHCS	-	△	
7	2	999-402-1303-Z	M10-15 X 30 MM LG SHCS	-	△	
6	1	B 113400 △	BLADDER, 3" BLADDER CHUCK	A	△	
5	REF	B 112951	BODY TUBE, 3" BLADDER CHUCK (IN BODY ASSY)	A	△	
4	1	B 112541	END CAP, 3" BLADDER CHUCK	A		
3	REF	C 112540	BLADDER PLUG, 3" BLADDER CHUCK (IN BODY ASSY)	A		
2	1	C 112530	COMPRESSION RING, 3" BLADDER CHUCK	B		
1	REF	A0654-X	ASSEMBLY, 3" SPLIT CLAMP SET UC-3000	A	△	

SUPERSEDED BY		TOLERANCES & FEATURES (EXCEPT AS NOTED)		3" UC-3000 BLADDER CHUCK	
SUPERSEDES		X = .005 ALL FILLETS R6 R 100X XX = .010 ALL CHAMFERS .06 X 45° XXX = .015 SURFACE FINISH 63 RMS		MATERIAL: H.HOPE	
		ANGLES = 4°		STANDARD LENGTH	
		CENTERING ALIGNMENTS = .02°		TIRE VALVE	
		THIS DRAWING PRODUCED ON A CAD SYSTEM. DO NOT ALTER MANUALLY. DO NOT SCALE FROM THIS DRAWING.		DATE: 1/8/99	
DRAWN BY: J.B. HOK		CHECK: FULL		MATERIAL: H.HOPE	
APPROVED BY: H.HOPE		SHEET: 1 OF 1		PART NO: 63071-X	
NEXT ASSY: TOP ASSY.				REV: C J	



INFLATION & DEFLATION

“tank” valves can be supplied by Double E. With a properly selected inflation tool (Refer to page 4), fully inflate the chuck. Use full line pressure (**80 psi / 5.5 bar min., recommended**) and take care to tightly engage the inflation accessory with the valve. Because Double E inflation accessories measure air pressure which is actually delivered into the chuck; they are recommended for all bladder chuck applications.

NOTE: Inadequate inflation is the most common cause of bladder chuck slippage.

E. DEFLATION

1. To release the assembly from the core, depress the valve and allow all air to escape.

IV. Bladder Chuck Repair

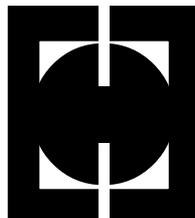
A. VALVE REPLACEMENT

1. Remove core chuck from through-shaft.
2. Unscrew old valve with a 7/16" (11 mm) socket wrench and install replacement using pipe sealant. Test for leaks.

CAUTION: The bladder must not be inflated unless covered by core(s) across its total length. **SERIOUS DAMAGE MAY RESULT.**

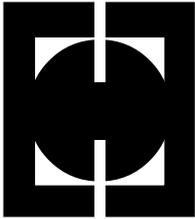
3. If chuck still leaks, replace the bladder as follows.

VALVE & BLADDER REPLACEMENT



B. BLADDER REPLACEMENT

- 1. REMOVE END CAP:** Unscrew end cap then pull the end cap off the bladder.
- 2. REMOVE THE COMPRESSION RING:** Loosen the three M6 screws, approximately six threads, with a 5 mm Tee hex wrench. Then tap the end of the wrench with a hammer to push the ring from its location. Remove the screws and pull or pry the compression ring from the chuck.
- 3. REMOVE THE OLD BLADDER:** This can normally be easily done by hand. If any tools are required, take care to not scratch the body barbs.
- 4. INSTALL THE NEW BLADDER:** This will require careful force to stretch the bladder over the barbs.
NOTE: DO NOT USE LUBRICANT.
- 5. INSTALL THE COMPRESSION RING:** Use the screws, with Loctite applied to the threads, to draw the compression ring into position. Clean exposed bladder.
- 6. INSTALL THE END CAP:** Screw end cap back on.



TROUBLE SHOOTING

C. OTHER REPAIRS

1. **THREAD REPAIRS:** If the clamping screw holes become worn, they can be repaired with Heli-coils.
2. **FACTORY REPAIRS:** Consult the Double E Company about repairs other than those described. In some cases, factory repair may be necessary.

V. Trouble Shooting

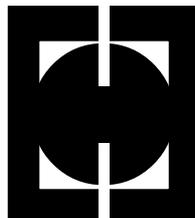
A. PROBLEM: CHUCK WILL NOT ENTER CORE

1. Check core size. The end cap has a 2.98" (75.7 mm) outside diameter. Therefore, it is not suitable for undersized cores.
2. Check for core damage. If necessary, trim the core entrance with a knife. Seek elimination of the problem.
3. Check deflation. If deflation is difficult, replace the valve.

B. PROBLEM: CHUCK SLIPS IN CORE

1. Check inflation. Double E inflation accessories are designed to measure the air pressure within the chuck. If the pressure achieved is less than **80 psi / 5.5 bar**, check air supply and inflation technique.
2. Check operational torque. Consult torque limitations.

SPECIFICATION SHEET



C. PROBLEM: CHUCK LEAKS

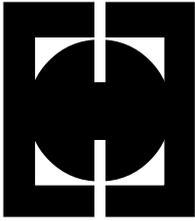
1. Replace valve and test **INSIDE CORE ONLY**.
2. Replace bladder and test **INSIDE CORE ONLY**.

D. PROBLEM: BLADDER TEARS IN OPERATION

1. Replace bladder.
2. If the problem persists, the torque, possibly the “E-STOP,” is excessive. Consult the Double E Company for alternative chucks.

VI. Bladder Chuck Specifications

NOMINAL SIZE IN. (mm)	3" (76.2 mm)
TORQUE CAPACITY AT 80 PSI INCH-POUNDS	1200
TORQUE CAPACITY AT 80 PSI NEWTON METERS	135
WT. / FLANGED CHUCK (w/ MAX. BORE) Lb. (kg)	5.4 (2.45)
MAX. ROLL WEIGHT Lb. (kg)	800 (364)



WARRANTY

VII. Warranty and Returns

A. LIMITED WARRANTY

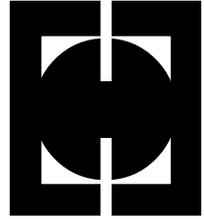
Double E warrants that products manufactured by it will be free from defects in material and workmanship for a period of one (1) year from the date of shipment. This warranty shall not apply to any goods which have been subjected to misuse, improper installation, repair, alteration, neglect, accident, abnormal conditions of operation, or use or maintenance in any manner contrary to Double E's Instructions, nor to products not manufactured by Double E. There are no express warranties other than as expressed herein and no words or conduct of any representative of Double E shall be deemed to create any except by express written consent.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, DOUBLE E HEREBY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OF THE GOODS SOLD HEREUNDER AND ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, NOTWITHSTANDING ANY STATEMENTS OR OTHER WRITINGS REGARDING FITNESS, CAPACITY, OR SUITABILITY OF THE GOODS.

Double E's obligation under the express warranty are limited to repair or replacement of the affected part or parts, at Double E's option, or to refund of the purchase price. In no event shall Double E be liable for Buyer's manufacturing costs, lost profits, goodwill, or any other special, incidental or consequential damages arising out of the breach of the agreement.

This remedy shall be available only where claims for failure of goods to conform to this agreement or damage in transit (where applicable) are made in writing and received by Double

RETURNS



E within ten (10) days after Buyer's receipt of such goods or failure of goods to conform. If not received within such period, such claims shall be deemed waived by Buyer. Buyer shall afford Double E prompt and reasonable opportunity to inspect any goods as to which a claim is made and Double E shall have the right of final determination of the cause and existence of any defect under this warranty. No material may be returned to Double E without Double E's express prior permission in the form of a return authorization number.

Correction of non-conformities, in the manner and for the period provided above, shall constitute fulfillment of all liabilities of Double E to Buyer with respect for the goods, whether based on contract, negligence, strict tort, or otherwise.

B. RETURNS

Warranty and non-warranty returns are initiated through the issuance of a return authorization (R.A.) number from an authorized Double E sales or service/support representative. This can be obtained by calling Double E in West Bridgewater, MA at 508-588-8099.

Product returns should be sent to the address below:

The R.A. number should be clearly evident on the shipping label and/or invoice and the package should be shipped freight prepaid. If questions arise or if additional information is required, please call the customer service department at **508-588-8099**.

**DOUBLE E COMPANY, INC.
319 MANLEY STREET
WEST BRIDGEWATER, MA 02379 USA**