

---

# TB & TBC Series System

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## OPERATORÕS MANUAL

---

# Warranty

Newport Corporation warrants this product to be free of defects in material and workmanship for a period of one year from the date of shipment. If found to be defective during the warranty period, the product will either be repaired or replaced at Newport's option.

To exercise this warranty, write or call your local Newport representative or contact Newport headquarters in Irvine, California. You will be given prompt assistance and return instructions.

Repaired or replaced products are warranted for the balance of the original warranty period or 90 days, whichever is longer.

This warranty does not apply to defects resulting from modifications or improper use of the system or its component parts.

This warranty is in lieu of all other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular use. Newport Corporation shall not be liable for any indirect, special, or consequential damages.

©1992, Newport Corporation

Irvine, California, U.S.A.

P/N 19602, Rev. A

IN-04923 (08-00)

---

# Table of Contents

<b>Warranty</b> .....	ii
<b>List of Figures</b> .....	iii
<b>Specifications</b> .....	iv
<b>Section 1 — General Information</b> .....	1
1.1 Introduction .....	1
1.2 Getting Started .....	1
1.3 Unpacking and Inspection .....	1
1.4 Safety Considerations .....	2
1.5 Warranty Information .....	2
<b>Section 2 — Assembly</b> .....	3
2.1 Preparing for Assembly .....	3
2.2 Assembling During Table Installation .....	3
2.3 Assembling After Table Installation .....	5
<b>Section 3 — Operation</b> .....	7
3.1 Operation .....	7
3.2 Maintenance .....	7
3.2.1 Cleaning .....	7
3.2.2 Spare Parts .....	7
<b>Section 4 — Factory Service</b> .....	8
4.1 Obtaining Factory Service .....	8
4.2 Service Form .....	9

## List of Figures

1.1 I-2000 Isolators with Model TBC Tie-Bars and Casters .....	2
2.1 Isolator Position .....	3
2.2 Installing Casters .....	4
2.3 Assembling Tie-Bar to the Isolator .....	5
2.4 Caster Assembly .....	6

# Specifications

**Load Capacity**

TBC-xx Series System  
Standard Capacity  
2800 lbs. (1271 kg.)

TBC-xx-HD Series System  
Heavy Duty Capacity  
5600 lbs. (2542 kg.)

TB-xx Series System  
2000 lbs. (908 kg.) per  
I-2000 Isolator in the System

**Standard Sizes\***

English Tables (ft.)	English Model	Metric Tables (m)	Metric Model	Price
<b>Tie-Bars and Casters</b>				
4 × 6	TBC-46	1.2 × 1.8	M-TBC-46	\$619
4 × 8	TBC-48	1.2 × 2.4	M-TBC-48	\$619
4 × 10	TBC-410	1.2 × 3.0	M-TBC-410	\$619
4 × 12	TBC-412	1.2 × 3.6	M-TBC-412	\$619
5 × 6	TBC-56	1.5 × 1.8	M-TBC-56	\$619
5 × 8	TBC-58	1.5 × 2.4	M-TBC-58	\$619
5 × 10	TBC-510	1.5 × 3.0	M-TBC-510	\$619
5 × 12	TBC-512	1.5 × 3.6	M-TBC-512	\$619
<b>Tie-Bars only</b>				
4 × 6	TB-46	1.2 × 1.8	M-TB-46	\$260
4 × 8	TB-48	1.2 × 2.4	M-TB-48	\$260
4 × 10	TB-410	1.2 × 3.0	M-TB-410	\$260
4 × 12	TB-412	1.2 × 3.6	M-TB-412	\$260
5 × 6	TB-56	1.5 × 1.8	M-TB-56	\$260
5 × 8	TB-58	1.5 × 2.4	M-TB-58	\$260
5 × 10	TB-510	1.5 × 3.0	M-TB-510	\$260
5 × 12	TB-512	1.5 × 3.6	M-TB-512	\$260

\* For other sizes, contact your local Newport Representative

---

# Section 1

## General Information

### 1.1 Introduction

---

The Newport TB Tie-Bar and TBC Tie-Bar with caster systems provide additional stability for table systems that use the Stabilizer series isolators. In addition, the model TBC (with casters), provides a secure and safe method of moving the table and isolators as a complete assembly, without the need for forklifts or other specialized equipment.

The Newport TBC system is designed to alleviate stress in the table and isolator system during relocation.

### 1.2 Getting Started

---

Please read this instruction manual thoroughly before assembling the Tie-Bar Systems.

### 1.3 Unpacking and Inspection

---

The components of the Newport TB and TBC Tie-Bar Systems are packed in a single box. Be sure the number of boxes you received is equal to the total number listed on the label (for example, if a box is labeled 1 of 4, there should be 4 boxes).

Use the diagram in Figure 1.1 to locate and identify each component as you remove it from the box. Carefully inspect all components for shipping damage. Report any shipping damage immediately to Newport and the shipping company.

The Newport TB Tie-Bar System should be ordered with the table system, and installed at the time of initial table installation. The TBC Casters may be ordered as an accessory to be installed at a later date.

## 1.4 Safety Considerations

The following terms are used in this manual that relate to your safety.

**Warning** is used to indicate dangers that could result in personal injury.

**Caution** is used to indicate situations that may result in damage to components of the Newport Table System.

## 1.5 Warranty Information

Warranty information may be found on the page preceding the Table of Contents in this manual. Should it become necessary to exercise the warranty, contact your Newport representative to determine the proper course of action. Newport Corporation maintains offices throughout the United States and other locations worldwide. Refer to the back cover of this manual for the address and telephone number of the office nearest you.

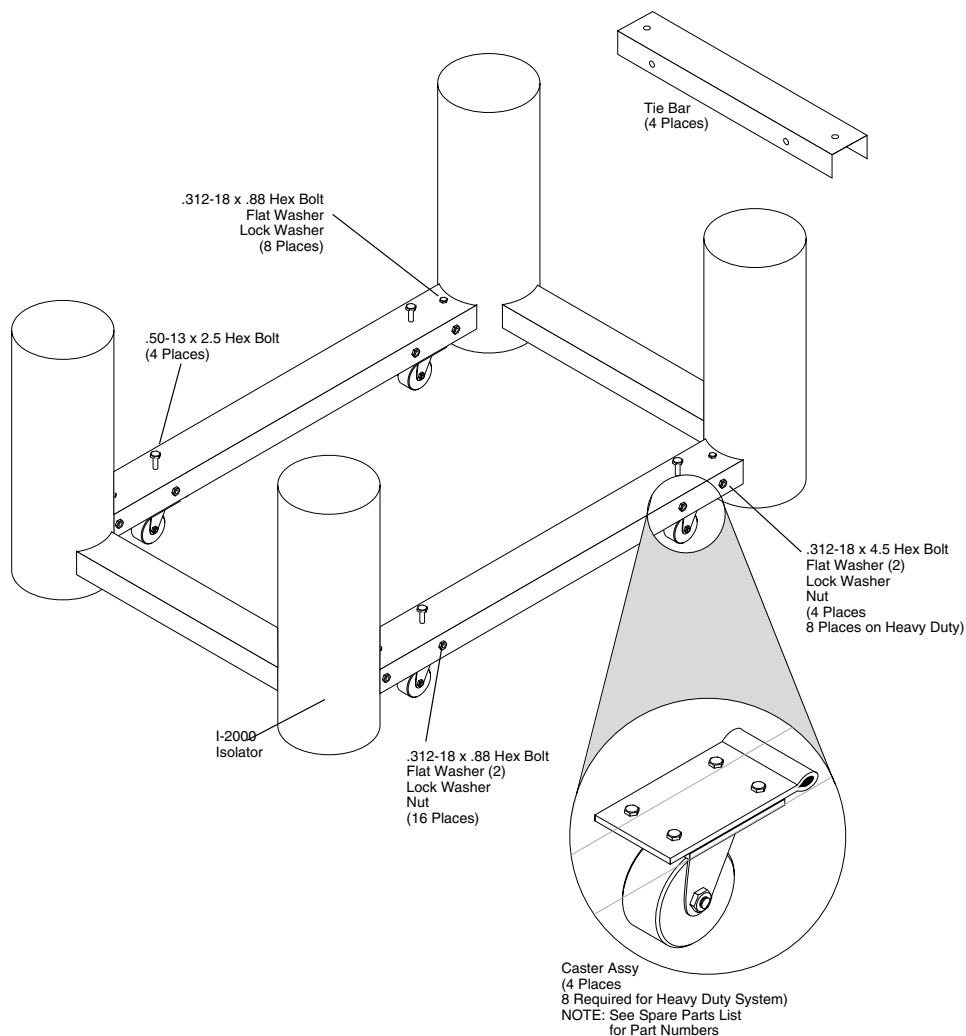


Figure 1.1 – I-2000 Isolators with Model TBC Tie-Bars and Casters.

# Section 2 Assembly

## 2.1 Preparing For Assembly

The Newport Tie-Bar systems are fastened to the isolators of the Newport Table System. If you are installing the caster kit on a previously assembled TB system, skip to Section 2.3. If you are installing the Tie-Bars on a new table system, proceed with Section 2.2.

## 2.2 Assembling During Table Installation

If you are installing a Newport Table system with Tie-Bars, use the following procedure to assemble the TB Tie-Bar System.

- A. Unpack the Table System components as described in the *Newport Vibration Control System Instruction Manual*. Ensure that the isolators have the attachment bars required for the Tie-Bars.
- B. Remove the Tie-Bars, casters (if ordered), and hardware from the packing cartons and place them on the floor near the table.  
NOTE: Casters may be pre-installed in the isolator attachment bars.
- C. Refer to Figure 2.1 for correct placement of the isolators.

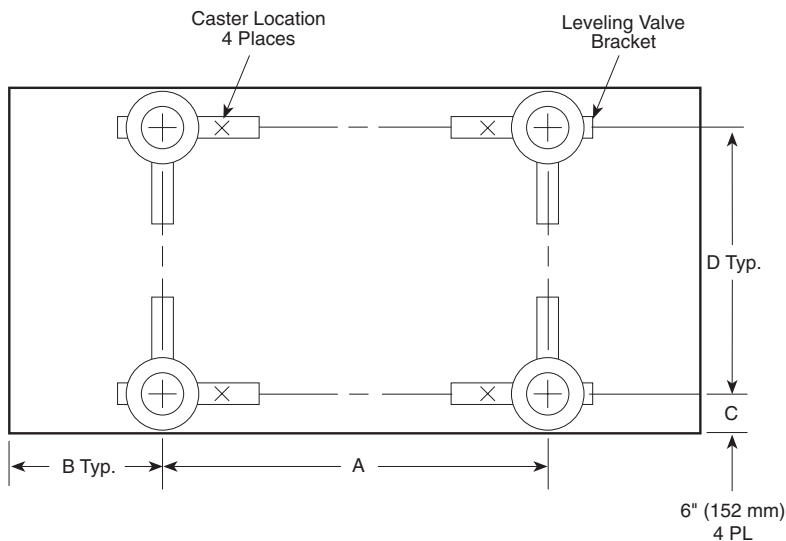


Figure 2.1 Isolator Position

Table Length	Distance A	Distance B
<b>English Sizes: [in. (mm.)]</b>		
6'	40 (987)	16 (406)
8'	52 (1282)	22 (559)
10'	66 (1682)	27 (686)
12'	80 (1974)	32 (813)
14'	94 (2420)	37 (940)
16'	104 (2565)	42 (1087)
18'	120 (2962)	47 (1194)
20'	134 (3308)	53 (1346)
<b>Metric Sizes: [mm.]</b>		
1500	839.6	330
1800	987.2	406
2000	1120.0	440
2100	1195.2	452
3000	1628.4	686
3600	1974.4	813

(Dimension D = Table Width - 12 in.)

- D. Use the following procedure to install the casters. Casters must be installed on the attachment bars marked with an X in Figure 2.1.

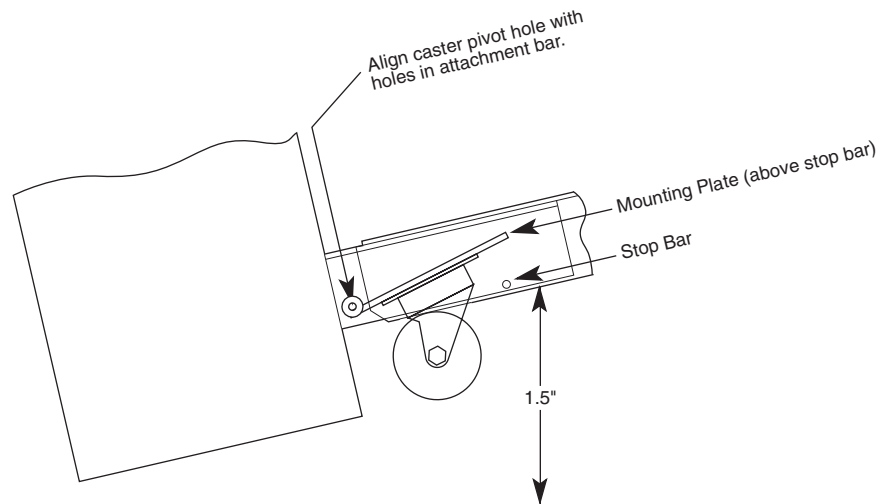
---

**CAUTION:**

**Do not allow the isolator to tilt more than 60° from vertical. Damping oil may spill from the isolator if it is tilted more than 60°.**

---

1. Carefully tilt the first isolator so that the attachment bar is raised approximately 1.5 inches. (Figure 2.2).
2. Slide the caster, with its pivot hole toward the isolator, under the attachment bar. Ensure that the end of the caster mounting plate is above the stop-bar as shown in Figure 2.2.
3. Return the isolator to its vertical position. Fasten the caster to the attachment bar with a .312-18 x 4.5-inch pivot bolt, lock washer, and nut. Use flat washers on both sides of the attachment bar (see Figure 2.3).



*Figure 2.2 Installing Caster*

4. Repeat steps 1 through 3 for the remaining isolators.
- E. Place the four Tie-Bars over the attachment bars extending from the isolators. Ensure that the bolt holes on the top and side of the Tie-Bars are aligned with the holes in the attachment bars. (Figure 2.3).
- F. Insert two .312-18 x .88-inch bolts with flat washers through the side holes in the Tie-Bar. Fasten the bolts with flat washers, lockwashers, and hex nuts inside the Tie-Bars. Do not tighten the bolts at this time.
- G. Insert a .312-18 x .88-inch bolt with washers into the hole on top of the Tie-Bar. Tighten the bolt hand-tight.
- H. Ensure that the isolator spacing is as described in Figure 2.1.
- I. When all four Tie-Bars have been installed, tighten all bolts securely.
- J. If Casters were installed in step D, install a .50-13 x 2.5-inch Lifting Bolt in the remaining hole at the top of each Tie-Bar. Thread the bolt into the assembly until it stops against the caster plate. Apply a small amount of oil or grease to the bolt for smoother operation.



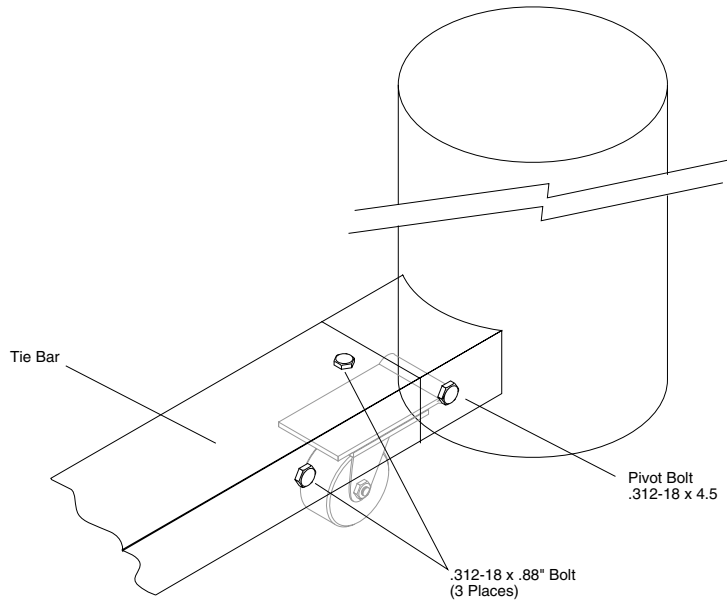


Figure 2.3 Assembling Tie-Bar to the Isolator

- J. Refer to the *Vibration Control System Instruction Manual* to continue assembling the Table.

### CAUTION

**The isolators must be bolted to the table using the Safelok™ clamps provided with the isolators prior to lifting & moving the table on the casters.**

## 2.3 Assembling After Table Installation

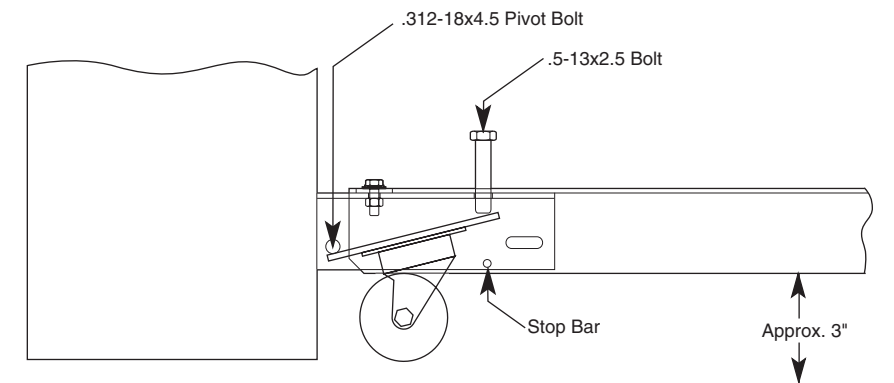
The following procedure is for installing the TBC Tie-Bar Casters to an existing Table System. This procedure assumes that the Table System is assembled, with the Tie-Bars and table top in place. Casters are installed in the attachment bars marked with an X in Figure 2.1.

- A. Turn off the air supply to the table and allow the table to settle before proceeding.
- B. Place a fork-lift or similar equipment under one of the longer Tie-Bars so that the forks are no more than 12" (30 cm) from the isolators. Carefully raise the table, isolators, and tie bar assembly approximately three inches.

### WARNING:

**The assembled table system may weigh in excess of 1000 pounds (454 kg). Be sure the table is secured to the isolators using the Safelok™ clamps provided with the isolators prior to lifting. Personal injury could result if the table slips off of the forklift. Place blocks under the raised isolators before working under the Tie-Bars**

- 
- C. Refer to Figure 2.4. Slide one caster under each end of the Tie-Bar so that the caster pivot hole is toward the isolator and the end of the caster mounting plate is above the stop bar.
  - D. Fasten the casters to the attachment bars with the .312-18 x 4.5-inch pivot bolts and hex nuts. Be sure to install the flat washers on each side of the assembly.
  - E. Tighten the bolts to secure the casters and lower the table assembly until the isolators are resting on the floor.
  - F. Insert the .50-13 x 2.5-inch bolt through the top of the Tie-Bar at each end. Thread the bolts into the Tie-Bar until they stop on the caster plate. Apply a small amount of oil or grease to the bolt for smoother operation.
  - G. Repeat steps B through F for the Tie-Bar on the opposite side of the table.



*Figure 2.4 Caster Assembly*

- H. Level and float the table as described in the *Vibration Control System Instruction Manual*.

---

### CAUTION

**The isolators must be bolted to the table using the Safelok™ clamps provided with the isolators prior to lifting & moving the table on the casters.**

---

---

# Section 3

## Operation

### 3.1 Operation

---

The Newport TBC Caster and Tie-Bar System provides a safe and stable method for moving an assembled Table System without the need for disassembling the table. To move the table after assembly:

- A. Turn off the air supply and allow the table top to settle.
- B. Ensure that the isolators are bolted to the table using the Safelok™ clamps.
- C. Use a wrench to turn the four caster Lift Bolts clockwise (CW) into the Tie-Bars, raising the isolators off the floor.
- D. Carefully roll the table to its new location.

---

**WARNING:**

**There are no brakes on the casters. To prevent injury or damage do not roll the table up or down ramps.**

---

- E. After relocating the table, turn the caster Lift Bolts counter-clockwise (CCW) until the isolators are resting on the floor.
- F. Connect the air supply and refloat the table.

### 3.2 Maintenance

---

Newport TB and TBC systems require little maintenance. No periodic maintenance is required.

#### 3.2.1 Cleaning

Newport Tie-Bars are made of painted carbon steel. They may be cleaned by applying non-abrasive liquid household cleaner to a rag and wiping the surface dry. Avoid abrasive cleaners as they will scratch the surface.

#### 3.2.2 Spare Parts

<u>Part Name</u>	<u>Part No.</u>
Caster Assy	17847
Kit, Caster Mounting	17853
Kit, Tie Bar Mounting Hardware	17855
Instruction Manual	19602
Tie Bar	17574

*Consult Newport for proper length.*

---

# Section 4

## Factory Service

### 4.1 Obtaining Factory Service

---

To obtain information concerning factory service, contact Newport Corporation or your Newport representative. Please have the following information available.

1. Model number.
2. Purchase order number.
3. Complete description of the problem.

If components are to be returned to Newport Corporation, you will be given a Return Authorization Number, which you should reference in your shipping documents.

Please fill out the service form located on the next page, and have the information ready when contacting Newport Corporation. Include the completed service form with any parts or components that are returned.

#### **Comments or Suggestions**

This manual was prepared with the help of several of Newport's customers. We gratefully acknowledge their assistance.

We would appreciate any comments or suggestions you may have to improve this manual. Please call us at (714) 863-3144.

# Service Form

**Newport Corporation**  
U.S.A. Office: 949/863-3144  
FAX: 949/253-1800

Name \_\_\_\_\_ RETURN AUTHORIZATION # \_\_\_\_\_

Company \_\_\_\_\_ (Please obtain prior to return of item)

Address \_\_\_\_\_

Country \_\_\_\_\_ Date \_\_\_\_\_

P.O. Number \_\_\_\_\_ Phone Number \_\_\_\_\_

## Item(s) Being Returned:

Model # \_\_\_\_\_ Serial # \_\_\_\_\_

Description: \_\_\_\_\_

Reason for return of goods (please list any specific problems) \_\_\_\_\_

\_\_\_\_\_

## Please Describe the Problem:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Attach additional sheets as necessary).

## Where is the Equipment Installed?

(factory, controlled laboratory, out-of-doors, etc.) \_\_\_\_\_

Maximum Air Pressure Available? \_\_\_\_\_ Regulated? \_\_\_\_\_

Any additional information. (If special modifications have been made by the user, please describe below).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



