



TEST SIEVE SHAKERS

Ro-Tap® Models RX-29 RX-30 RX-94

Course Sieve Shaker Model RX-812

Ro-Tap® E Model RX-29-E

Quality • Service • Value

CERTIFIED

Material Testing Products

Operations Manual

2011

TABLE OF CONTENTS

	Page #
Table of Contents	1
Basic Information	2
Hammer Drop Adjustment	3
RX-29, RX-30 Ro-Tap ® Parts Diagram	4
RX-29, RX-30 Ro-Tap ® Parts List	5
RX-94 Ro-Tap ® Parts Diagram	6
RX-94 Ro-Tap ® Parts List	7
RX-812 Coarse Sieve Shaker Parts Diagram	8
RX-812 Coarse Sieve Shaker Parts List	9
Ro-Tap ® E Cover Page	10
Ro-Tap ® E Operating Instructions	11
Ro-Tap ® E Twin Nut Clamping System	12
Ro-Tap ® E Parts List	13
Standard Test Sieve Analysis	14-16
Limited Warranty and Limitation	17

W.S. TYLER™ MENTOR, OHIO

© Copyright 2010, Haver Tyler, Inc. All rights Reserved

Ro-Tap® is a registered trademark of Haver Tyler, Inc.

BASIC INFORMATION

Installation

The sieve shakers (**Ro-Tap**® Models RX-29 & RX-30 & Coarse Model RX-812) must be mounted on a **Ro-Tap**® Test Stand (R-40041), concrete foundation or heavy bench capable of supporting 200 lbs. Moderate tension of the mounting bolts is all that is required.

Basic Operation

A) Ro-Tap®

Assemble a stack of sieves, beginning with the top cover, the coarsest (largest) sieve opening on top, with a pan on the bottom. Place the stack into the shaker, with the hammer tilted up and out of the way. Place the **Ro-Tap**® sieve cover, with the plug installed, on top of the sieve stack. The sieve support clamp bar is then adjusted, by loosening/tightening the two adjustable handles. Press the yellow buttons and turn handles in the appropriate direction. Bring the top of the Ro-Tap® sieve cover flush with the top of the upper carrying plate.

NOTE: Some force may be required to move the support clamp bar on the **Ro-Tap**® II (RX-94). This is due to the resistance of the gas safety spring.

B) Coarse Sieve Shaker

Assembly of the sieve stack is the same as with the **Ro-Tap**®. The clamping assembly is adjusted from the top down by screwing the two knobs down on the threaded clamp bars.

Starting the Shaker (Timer Function)

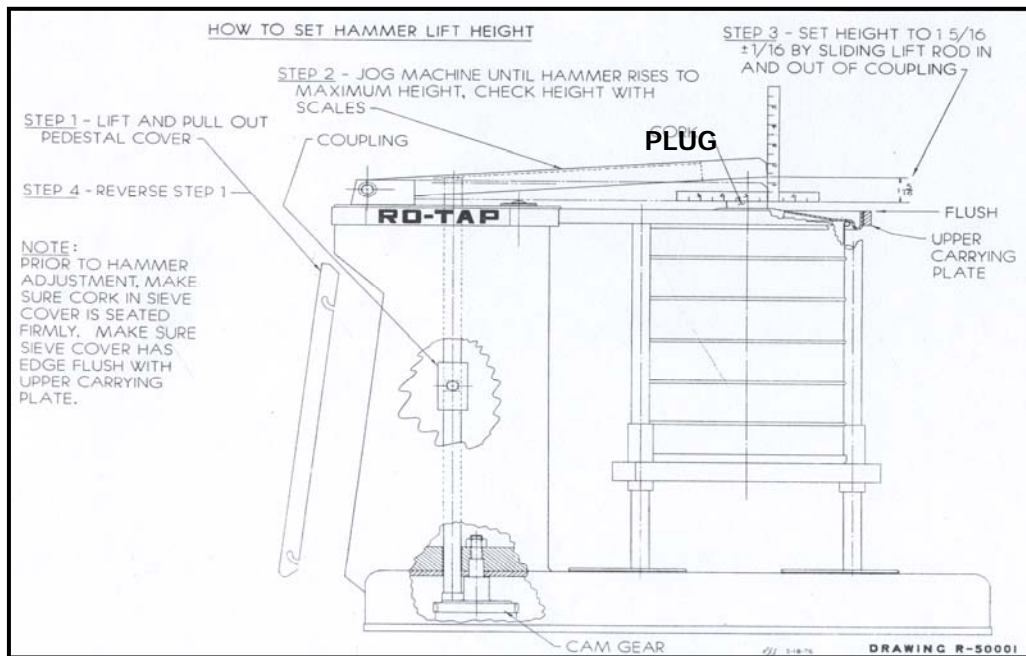
Make sure a sieve stack is in place at the time. To set the test run time, set the test duration by pushing the increase button until the desired time appears in the digital window. Push the start button to begin the test. An audible tone will be heard at the end of the test.

Should you wish to stop or interrupt the test at any time, simply push the stop button. Note that the remaining test time is frozen on the readout. To continue, simply push the start button. Once a test is complete, if you wish to repeat the prior process, simply push the start button. The most recent time will remain in memory.

NOTE: The timing device also has a clock function. To use this option, hold the "clock" set/display button and adjust the proper time with the increase/decrease buttons.



HAMMER DROP ADJUSTMENT



SETTING THE HAMMER LIFT HEIGHT

Ro-Tap® MODELS: RX-29 and RX-30 and RX-94

(NOTE: THIS SETTING HAS BEEN MADE ON ALL NEW UNITS)

- NOTE:** Prior to hammer adjustment; make sure plug is seated firmly in sieve cover. Make sure sieve cover has top edge flush with upper carrying plate. A stack of sieves must be used to achieve this setting.
- STEP 1:** Remove pedestal cover.
- STEP 2:** Jog machine until hammer rises to maximum height or use a box wrench on the hex head screw, located on top of the pedestal. Check height with scales.
- STEP 3:** Set height to $1\frac{5}{16} \pm \frac{1}{16}$ by loosening screw on coupling and adjusting lift rod.
- STEP 4:** Tighten screw on coupling.
- STEP 5:** Replace pedestal cover.

Lubrication

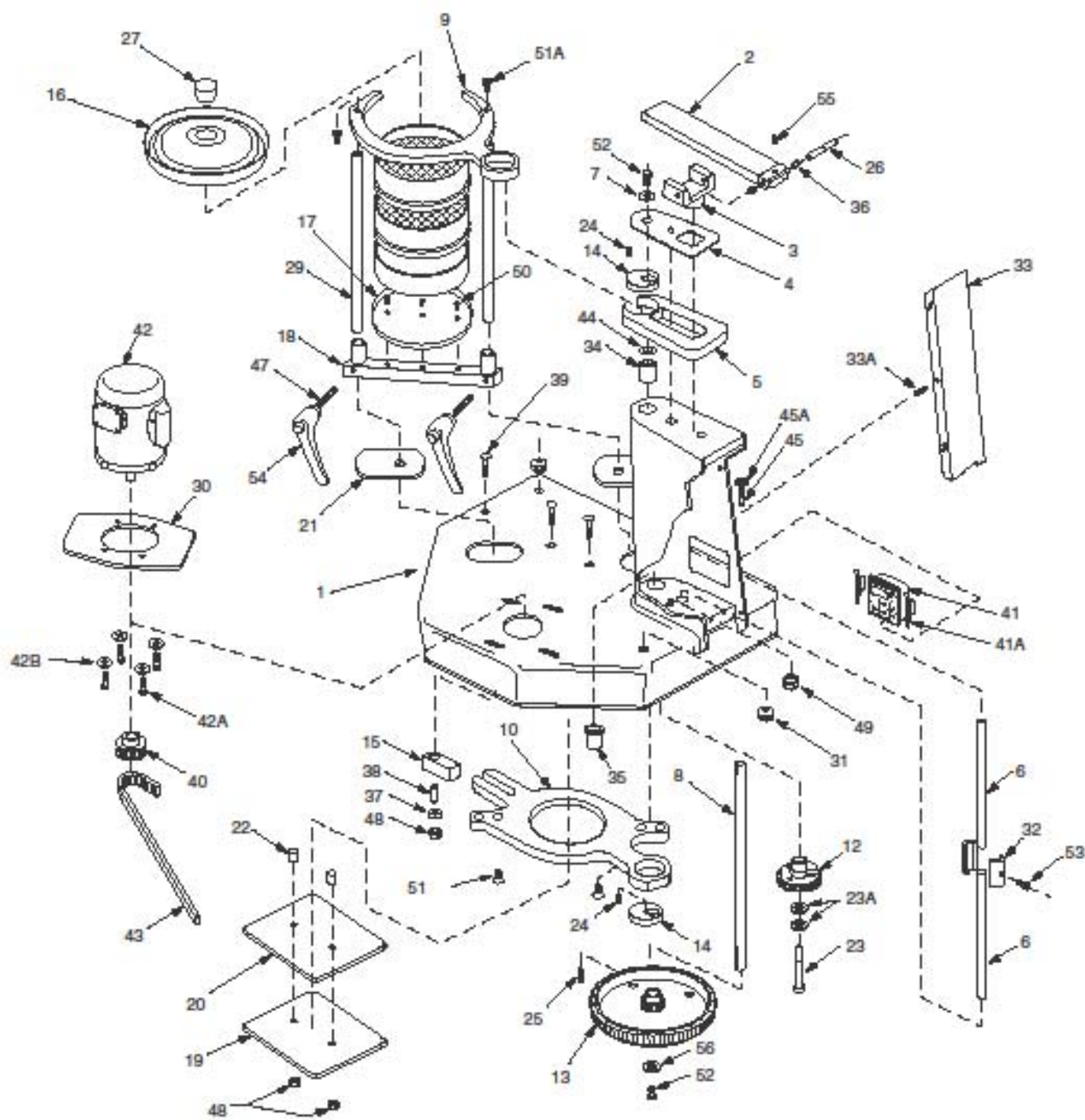
The Tyler Sieve Shakers require only minimal periodic lubrication. The units incorporate plastic and oil-impregnated bronze bearing materials, which are self-lubricating. A few drops of light oil or WD-40™ every six months is all that is necessary to prevent drying of the parts. Application of the same lubricants will suffice if a squeak or a drag should develop in the mechanism.

PLEASE BE ADVISED: Review these warnings prior to use

WARNING	
E	Before removing cover set timer to zero and disconnect the power!
D	Vor Öffnung der Maschine Zeitschaltuhr auf 0 stellen und Netzstecker ziehen!
F	Tableau indicateur: Avant L ouverture de la machine veuillez regler la minuterie a 0 et retirer la fiche de contact!
S	Advertencia: Ponga el marcador en zero y desconecte la electricidad antes de quitar la tapa!

⚠ WARNING
DO NOT USE THIS EQUIPMENT WHERE HAZARDOUS OR EXPLOSIVE DUST, VAPOR OR LIQUIDS MAY BE PRESENT
DO NOT MOUNT ON COMBUSTIBLE SURFACES

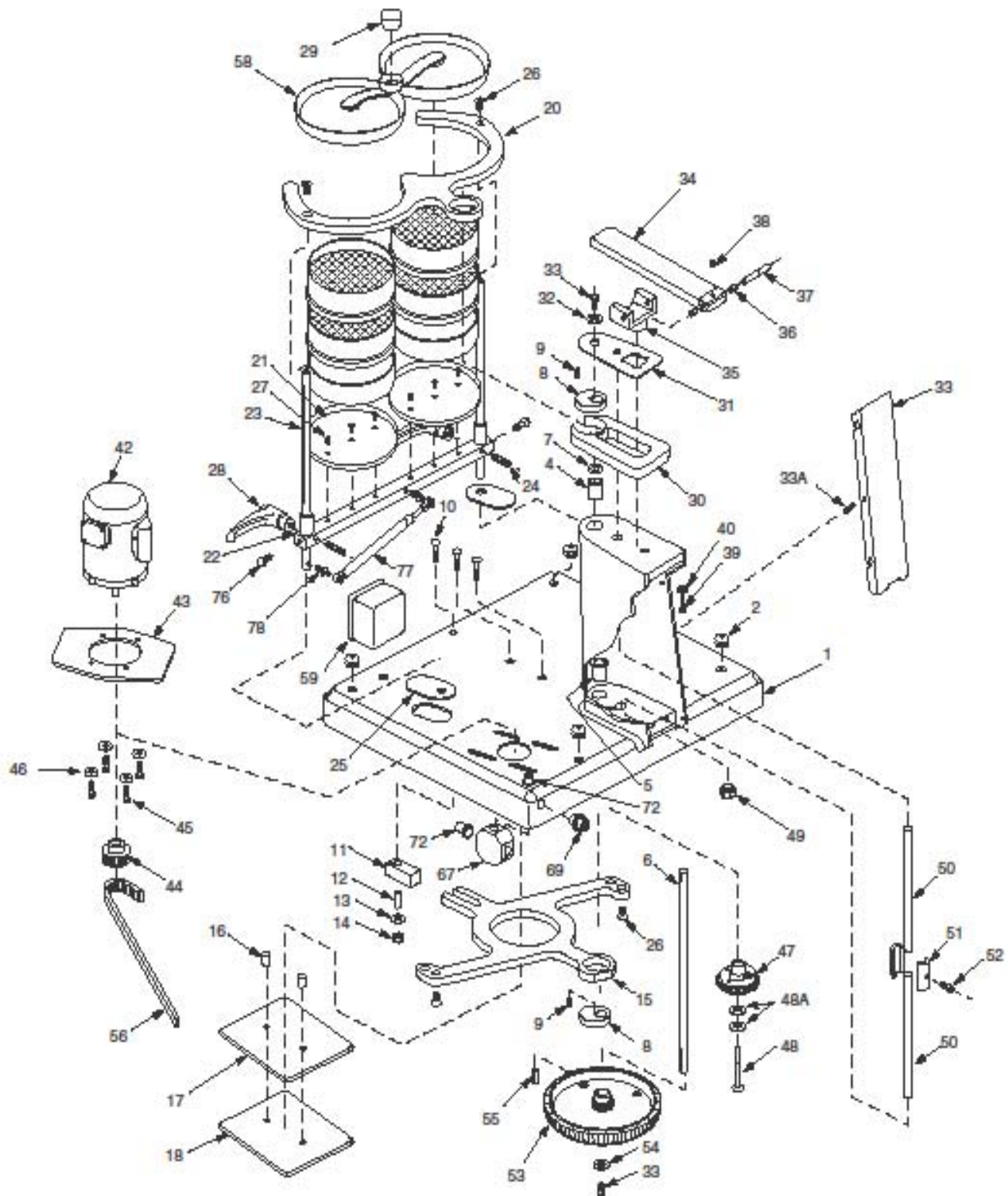
RX-29 & RX-30 Ro-Tap® PARTS DIAGRAM



RX-29 & RX-30 Ro-Tap® PARTS LIST

ITEM	PART	DESCRIPTION	QTY REQ'D	ITEM	PART	DESCRIPTION	QTY REQ'D
1	107770	Base	1	41	R-40037	Electronic Timer (230v)	1
2	R-20029	Hammer	1	41A	R-40040	Timer Mounting Clip	2
3	R-20023	Hammer Block	1	42	P-1500-23	Motor-Standard 115/230v 60/50Hz 1Phase	1
4	R-30019	Sheet Guard	1	42A	ZF10183	3/8-16 x 1" Hex Flange Bolt	4
5	R-30010	Rotating Guard	1	43	R-10058	Timing Belt	1
6	R-10036	Lift Rod	2	44	R-10055	Shim	1
7	R-10038	Upper Main Shaft Washer	1	45	ZZ10068	1/2-13 x 2.50" Long Hex Hd. Bolt	1
8	R-20027	Main Shaft	1	45A	ZZ10323	1/2 I.D. Lock Washer	1
9	R-30008	Upper Carrying Plate/RX-29	1				1
9a	R-30008-1	Upper Carrying Plate (alum)	1	47	R-10079	Clamp Screw	2
9	R-30027	Upper Carrying Plate/RX-30	1	48	ZF10221	3/8" Lock Nut	3
10	R-30009	Lower Carrying Plate	1	49	ZF10222	1/2" Hex Lock Nut	1
12	R-20039	Cam Gear	1	50	ZF10231	10-32x.50" LongFlatHeadSocketCap Screw	3
13	R-30015	Timing Belt Pulley	1	51	ZF10241	3/8-16x.75"LongFlatHeadSocketCap Screw	2
14	R-10034	Eccentric Disc	2	51A	ZF10183	3/8-16x1" Hex Flange Bolt	2
15	R-10032	Block	1	52	114162	3/6-16x x 62" Long Hex Head Screw	2
16	R-30007	Sieve Cover (RX-29)	1	53	ZF10251	5/16-24x1.25" LongSocket HeadCapScrew	1
16	R-30011	Sieve Cover (RX-30)	1	54	R-20082	Adj. Handle (Support Bar)	2
17	R-30006	Sieve Support Plate (RX-29)	1	55	ZA10148	#10-24x.25" Socket Hd. Set Screw	1
17	R-30013	Sieve Support Plate (RX-30)	1	56	ZF10271	3/8 I.D. X 1.50" O.D. Fender Washer	1
18	R-30023	Sieve Support Clamp Bar (RX-29)	1	60*	R-10018	Timer Cord w/Plug	1
18	R-30022	Sieve Support Clamp Bar (RX-30)	1	61*	R-10019	Cable Tie M'l'g	3
19	R-20019	Backup Plate	1	62*	R-10112	Straight Connector (APC-050)	2
20	R-20020	Bearing Plate	1	66*	107764	Flexible Conduit	1
21	R-20033	Shield	2	67*	R-10076	Wire Clip	1
22	R-10028	Tube Spacer	2	68*	ZZ10011	Screw For Wire Clip & Ground Screw	3
23	R-10029	Cam Shoulder Screw	1	69*	R-20081	Wrench	1
23A	106582	I.D. Shim	2	* ITEMS NOT SHOWN * PARTS SOLD AS EACH			
24	R-10042	Main Shaft Key to Eccentric	2				
25	R-10039	Main Shaft Key-Lower	1				
26	R-10035	Hammer Pin	1				
27	R-10066	Urethane plug	1				
28	108184	Name Plate	1				
29	R-10033	Tie-Rod	2				
30	R-30018	Motor Adapter	1				
31	ZA11167	Grommet	2				
32	R-10030	Lift Rod Coupling(2.50" Long)	1				
33	R-40011	Pedestal Cover	1				
33A	8/18 X 75	Self Tapping Screw	1				
34	R-10061	Flange Bearing	1				
35	R-10062	Bearing	1				
36	R-10063	Flange Bearing	2				
37	ZF10168	Thrust Washer	1				
38	R-10065	Steel Bushing	1				
39	ZF10174	3.8-16 NC X 2.25" Carriage Bolt	3				
40	R-10070	Sprocket-14-Teeth (1800 RPM) w/Set Screw	1				
		Sprocket-17-Teeth (1500 RPM) w/Set Screw	1				
41	R-40029	Electronic Timer (115v)	1				

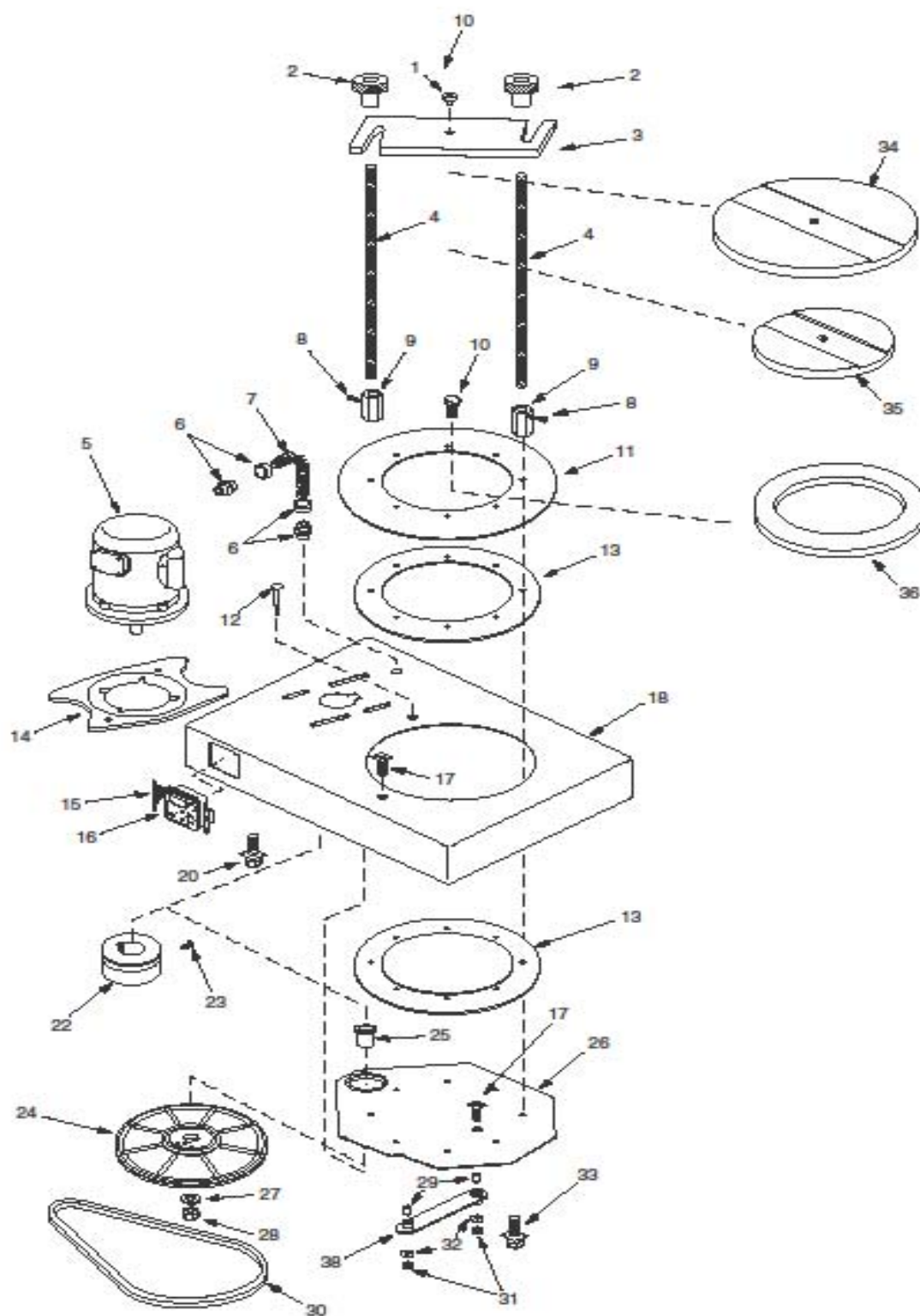
RX-94 Ro-Tap® II PARTS DIAGRAM



RX-94 Ro-Tap® II PARTS LIST

ITEM	PART	DESCRIPTION	QTY REQD	ITEM	PART	DESCRIPTION	QTY REQD
1	R-40023	Painted Base Weldment	1	48A	106582	½" I.D. Shim	2
2	ZA11167	Grommet	4	49	ZF10222	½"-13 Locknut	1
3	R-10117	Gasket Channel	4	50	R-10036	Lift Rod	2
4	R-10061	Flanged Bearing	1	51	R-10030	Lift Rod Coupling	1
5	R-10062	Bearing	1	52	ZF10251	5/16-24 x 1/25" Long Socket Head Cap Screw	1
6	R-20027	Mainshaft	1	53	R-30015	Timing Belt Pulley	1
7	R-10055	Shim 1.420 O.D. x .0155 Th.	1	54	ZF10271	3/8 I.D. X 1.50" O.D. Fender Washer	1
8	R-10034	Eccentric Disc	2	55	R-10039	Main Shaft Key (Lower)	1
9	R-10042	Main Shaft Key	2	56	R-10058	Timing Belt	1
10	ZF10174	3/8-16 x 2.25" Carriage Bolt	3	57	R-40011	Pedestal Cover	1
11	R-10032	Block	1	58	R-40020	Dual Sieve Cover	1
12	R-10065	Steel Bushing .62 O>D> x .385 I.D. x1.25"	1	59	R-40030	Timer Enclosure	1
13	ZF10168	3/8" Flatwasher	1	60*	R-40029	Electronic Timer (115v)	1
14	ZF10221	3/8-16 Locknut	2	60*	R-40037	Electronic Timer (230v)	1
15	R-40017	Lower Carrying Plate	1	61*	ZZ10014	¼ x 1.25" Long Hex Head Screw	2
16	R-10028	Tube Spacer	2	62*	ZZ10281	¼ I.D. Flat Washer	2
17	R-20020	Bearing Plate	1	63*	R-40034	Spacer (for Timer Enclos.)	2
18	R-20019	Back-Up Plate	1	64*	ZZ10253	¼-20 Hex Nut	2
19	ZF10221	3/8-16 Lockout	2	65	108184	Name Plate	1
20	R-40019	Upper Carrying Plate	1	66	Std.#7	Drive Screws	2
21	R-30006	Support Plate	2	67	R-10118	3 ¼" Octagon Box (Appleton #30))	1
22	R-40018	Dual Sieve Support Clamp Bar	1	68*	R-40032	3 ¼" Square Box Cover	1
23	R-40021	Tie Rod	2	69	R-10119	½" Cord Grip Strain Relief (Appleton #CG31505)	1
24	R-10079	Clamp Screw	2	70*	11478	X 1/50 Long Nipple	1
25	R-20033	Shield	2	72	R-10112	Straight Connector?APC-050	2
26	ZF10241	3/8-16 x .75" Long Flat Head Screw	4	73*	R-10116	Extra Flex Connector/ APC-0509	2
27	ZF10231	#10-32 x .50" Long Flat Head Screw	6	74*	114163	Non-Metallic Flex Conduit (LTC 050) 0' 12" Long	1
28	R-20082	Adj. Handles (Support Bar)	2	75*	114164	Non Metallic Flex Conduit (LTC050) 1' 9 ½" Long	1
29	R-10066-A	Urethane Plug	1	76	R-40028	Hand Retractable Plunger	2
30	R-30010	Rotating Guard Assembly	1	77	R-10099-30	Gas Spring (Guden #CG824-30)	1
31	R-30019	Sheet Guard	1	78	114165	Spring Stud (Guden #BS101-02)	2
32	R-10038	Upper Mainshaft Washer	1	* ITEMS NOT SHOWN *PARTS SOLD AS EACH			
33	114162	3/8-16 x .62" Long Hex Head Cap Screw	2				
34	R-20029	8" Hammer	1				
35	R-20023	Hammer Block	1				
36	R-10063	Flanged Bearing	2				
37	R-10035	Hammer Pin	1				
38	ZA10148	#10-24 x .25" Long Flat Point Socket Screw	1				
39	ZZ10068	1/2 x 2.50" Long Hex Head Bolt	1				
40	ZZ10323	½ I.D. Lockwasher	1				
42	P-1500-23	Motor-Standard 115/230V 60/50Hz 1 phase	1				
43	R-30018	Motor Adapter Plate	1				
44	R-10070	Sprocket-14 Teeth(1800 rpm) w/ Set Screw	1				
45	ZF10183	3/8-16 x 1.00" Long Hex Head Screw	4				
46	ZF10168	3/8 I.D. Flat Washer	4				
47	R-20039	Cam Gear	1				
48	R-10029	Cam Shoulder Screw	1				

RX-812 COARSE SIEVE SHAKER PARTS DIAGRAM



RX-812 COARSE SIEVE SHAKER PARTS LIST

ITEM	PART	DESCRIPTION	QTY.
1	LC10016	Locating Pin	1
2	LC10017	Clamping Knobs	2
3	LC10018	Clamp Bar	1
4	LC10015	Clamping Rods	2
5	P-1500-23	Motor ¼ HP 115/230V 60/50 Hz 1 Phase	1
6	R-10112	Flexible Conduit Connector	2
7	102542	Oilite Flexible Conduit – 8-1/2"	1
8	ZA10956	10-24 Cup Point Set Screw	4
9	LC10014	Coupling	2
10	LB10266	Rolok 10-24 Self Tap Screw	6
11	LC10007	Shield	1
12	LB10041	Special Carriage Bolt	1
13	LC10005	Bearing Ring	2
14	LC10052	Adapter	1
15	R-40040	Timer Mounting Clip	2
16	R-40029	Electronic Timer (115v)	1
16	R-40037	Electronic Timer 230v)	1
17	ZZ10792	-28 x 1-3/4" Soc. Cap. Ser.	2
18	LC10003	Base, Sieve Shaker	1
19	LC10052	Rubber Channel	1
20	ZF10183	3/8" – 16 x 1.00 Hex Hd. Bolt	3
21	108184	Nameplate	1
22	LB10111	Drive Pulley – 1-1/2" O.D.	1
23	ZA10148	10-24 x 3/8" Cup Point Set Scr.	1
24	LB10451	Pulley/Eccentric Assembly	1
25	LB10191	Flanged Stand Off Bushing	1
26	LC10006	Carrying Plate	1
27	ZF10168	3/8" Hard Washer	1
28	ZF10221	3/8" -16 Lock Nut	1
29	LB10201	Stand Off Bushing	2
30	LB10211	Drive Belt-21.310	1
31	ZZ10801	¼-"28 Black Lock Not	2
32	ZZ10301	Flat Washer	6
33	ZF10184	5/16"-18 Black Hex Hd. Bolt	2
34	LC10010	12" Cover Clamping Plate	1
35	LC10011	8" Cover Clamping Plate	1
36	LC10009	12" to 8" Conversion Plate	1
37*	R-10018	110V Cord Set	1
38	LC10012	Arm	1



Ro-Tap® E

Model RX-29-E

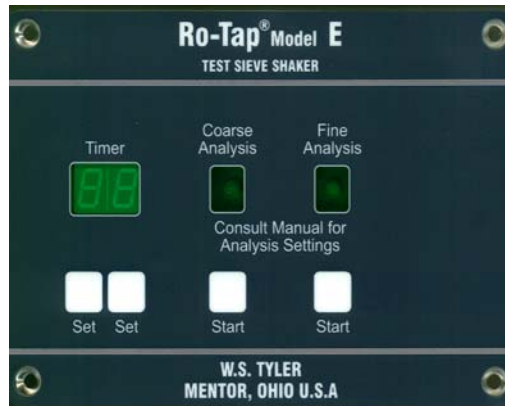


CE

STARTING AND OPERATING

Set values
Actual values

Entry keys
Left (-)
Right (+)



Starting the Machine

Switch on the machine with the **main switch** (located at the rear of the unit). All Indicators on the front panel will read "0".

Time

The sieving time is shown in minutes (99 minutes maximum) and appears in the indication field of set values/actual values. The sieving time will countdown to "0". Without setting the sieving time (set point 00) the machine operates continuously.

The sieving time can be fed by one pair of entry keys for each function. The left key decreases, while the right key increases the test time. When pressing one of the keys for a longer moment, the numbers pass quickly.

Analysis Settings

There are two amplitude analysis settings. One for **coarse** and the second for **fine material**.

The Model **Ro-Tap® E** features an intermittent operation. Every 10 seconds, the machine will pause for 3 seconds, allowing the sample to settle.

Analysis Guide: If the smallest particle is 1 mm (USA #18) or greater in size, use the COARSE analysis control setting. For all other applications, use the FINE setting.

Each material application is different. Local analysis may be required to determine which control setting will produce the best results.

Start/Stop

To start the machine, press the **START** button. As the unit runs, the remaining analysis time will be shown in the display window. To stop the machine, press the **START** button again.

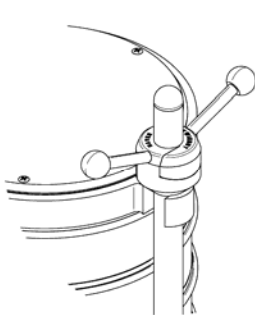
NEW HAVER TWINNUT CLAMPING SYSTEM

The new 'Haver TwinNut' clamping system perfectly combines the advantages of the previous Classic and Easylock Systems.

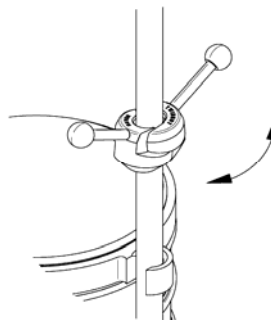


Function:

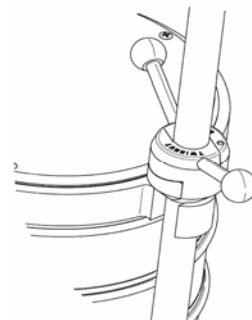
The sieve is fixed using the nuts in the same way as the Classic system (1.0 + 3.0). Varying heights of the sieve tower are achieved by opening the TwinNuts (2.0).



1.0



2.0

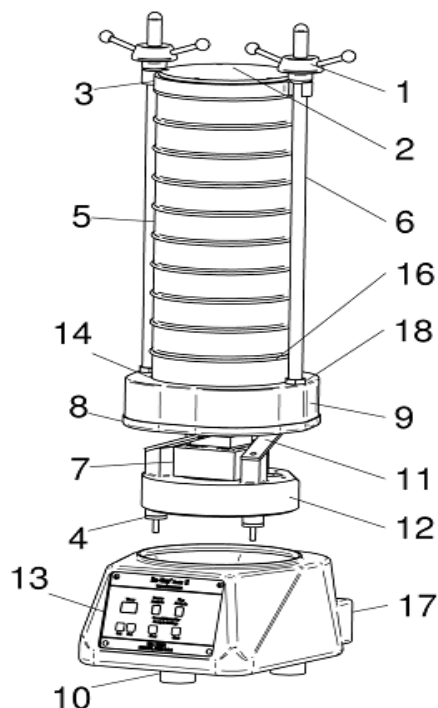


3.0

Advantages:

- The test sieves can be changed easily and quickly.
- Only a small turn is required to open and close the nuts.
- The wing-handles make the tightening of the nuts easier.
- The guide rods of the Classic system can also be used for the TwinNut system (it can be refitted at low cost).
- No grease and dust sensitivity.
- Suitable for every application area.
- Suitable for all HAVER Test Sieve Shakers.

RX-29 E Ro-Tap® PARTS DIAGRAM AND PARTS LIST



Item #	Piece	Designation	Article #
1	2	Nuts for clamping system Easy Lock®	00560129
2	1	Inspection glass without hole for machine cover (dry)	00561499
	1	Inspection glass with hole for machine cover (wet)	00561507
3	1	Cover with inspection glass	00561521
	1	Cover without inspection glass	00561514
	1	Cover with inspection glass and wide spreading spray diffuser	00561545
4	3	Rubber buffer	66000074
5		Test sieves (sold separately)	
6	2	Guide rods, clamping system Easy Lock®, 660 mm long	00560154
7	1	Oscillation magnet	65300016
8	1	Rubber profile for vibration body	00560441
9	1	Vibration body	68500312
10	3	Rubberized pads	00560014
11	3	Leaf spring	68500231
12	1	Base plate	68500311
13	1	Separate control unit	00560169
	1	Front panel with control board	
14	1	Rubber ring for vibration body Ø 204 / Ø 160	68500015
16	1	Sieve pan with outlet	
17	1	Plug connection with main switch and fuse box	
	1	Plate with cable with screw fitting	
18	2	Counter nut	
19	1	Precision fuse, 20x5 mm, 3, 25 Ampere MT (not shown)	65100000
20	1	Rubber seal for cover (not shown)	00560434
		*Call Customer Service for current pricing 800.321.6188	

TEST SIEVE ANALYSIS

Test Equipment

Test sieves “nest” together to form a “stack” of sieves. In most sieving tests the 8 inch diameter sieve is used. A test sieve shaker that provides both circular and tapping energy is recommended. Uniform mechanical motion will provide the most consistent results.

Testing Times

Free flowing, coarse material requires less time than fine, bulky particles. Once you establish the proper time, duplication of testing becomes extremely important to obtain accurate, repeatable results.

Conduct repeated experimental testing to determine the optimal testing time. For example, perform tests of 5, 10, 15 & 20 minutes. You can determine the optimal time when the results between the different times change no more than .5 to 1 percent. The shortest time should then be used consistently.

Performing a Sieve Analysis

You can begin your particle size distribution analysis after you properly collect, prepare and size a sample. Select test sieves with mesh openings that reveal particle distribution at critical sizes. These are usually stated in a product specification or determined by material processing requirements.

To perform the analysis, do the following:

1. Stack the sieves on top of each other with the coarsest (largest) opening on the top of the stack.
2. Put a bottom pan under the finest (smallest) opening sieve. This pan collects “fine” material that passes through the last one.
3. Use a laboratory scale (accurate to .1 gram) to weigh an empty container (such as an extra empty bottom pan) and establish the tare weight.
4. Weigh the sample material.
5. Empty the sample into the top of the stack. Make sure you do not overload the surface as this causes “blinding” or blocking of the openings.
6. Put the stack into the sieve shaker.
7. Place a cover on the top of the stack.
8. Make sure the stack is securely in place.
9. Set the proper length of time to agitate the material.
10. Turn on the shaker and run the test.
11. After the shaker stops, empty the material from the coarsest sieve into the empty container that you weighed in step (3). Use a soft bristle brush to gently brush the underside of the sieve to remove all of the particles.
12. Tap the side of the frame with the handle of the brush to clean the remaining material from the sieve.
13. Weigh the contents in the pan to the nearest 1/10 gram and record the data.
14. Return the material to its original sample container.
15. Repeat steps 11 through 14, using the container referenced in step (3) for each sieve, including the fine material in the bottom pan.
16. Total the weights to make sure the sum of the retained material and the material in the bottom pan is as close as possible to the original weight. Check your specification for allowable variation.
17. Divide the weight obtained from each sieve by the weight of the original sample. Record the percentage for each sieve.
18. Calculate and record the cumulative percentages as required.

The key to successful, repetitive particle analysis is developing standard testing procedures.

Basic Elements of Testing

1. Sample Preparation.
2. Test sample sizes or weights.
3. Test Equipment.
4. Testing times or intervals.
5. Recording results.

Sample Preparation

When deciding how much material to test, consider the type of material, screen ability of the material and the range of particle sizes.

If the particle range of material representing feed to a screen or product from a crusher is wide, use a large sample (from 500 to 1,000 GRAMS). If the material is finely ground, use a smaller sample of 25 to 100 grams.

Do not use too large a sample in the test. The smaller the sample, the more consistent the results (as long as the sample is properly taken). To obtain an accurate sieve test sample, every particle must present itself to the screen openings for retention or for passing through to the next finer sieve. Make sure the sample is large enough so that the coarsest sieve retains enough representative particles.

For example, if a "stack" contains six sieves, a fine particle must repeat the passing process six times. The fine particles cannot pass through to their proper end when overloading occurs.

As a general rule, limit the size of a sample in weight so that no sieve in the "stack" is overloaded. Overloading usually occurs in testing closely graded materials, where the range of particle size is limited. In such cases, determine the size by capacity of the sieve that retains the largest amount of the sample.

Use the following procedure to determine your sample size:

1. Accurately split out samples of varying weights (25, 50, 100, 150 and 200 grams) with a sample splitter.
2. Run the various samples on the selected sieves for five minutes.
3. Compare the results to get the correct sample size.

When two sample sizes provide similar results, use the larger of the two for your test size. For example, if the 100 gram sample shows approximately the same results as the 50 gram sample, but the 150 grams sample produces differing results, use the 100 gram sample as the correct sample size.

Near-mesh particles (those with dimensions close to the sieve opening) require that you lightly load the sieves. This allows presentation of the particles to the sieve opening many times, which allows maximum opportunity for accurate classification.

Wet Testing

Some materials do not test well under dry conditions. If the material is not water soluble, you can perform an accurate sieve analysis with special equipment.

The Sieve Shaker with a Wet Test Kit will be required. The wet test kit ensures there will be no splashing or contamination of the samples.

The test should be performed the same as dry material (previous section) with one exception. Water, as called for by the test procedure, must be added to the sample prior to the test run.

Static Electricity

Some materials generate static electricity during the dry sieving process. When particles “charge” themselves as they come in contact with other particles, they stick to the metal frame and cloth of the sieve. This prevents you from obtaining accurate results.

As a suggestion:

- Add a small amount of talc, activated charcoal, powdered magnesium carbonate or burgess clay to the sample material. For a 100 gram sample add approximately 1 gram of chemical.
- Mix thoroughly to completely coat the particle surfaces.
- Perform the sieve test.

This method may not eliminate static electricity entirely; however, the effect should be significantly reduced and will not affect your test results.

Gilson Company, Inc.

P.O. Box 200
Lewis Center, Ohio 43035

800.444.1508 **Toll Free**

740.548.7298 **Local**

740.548.5314 **Fax**

www.globalgilson.com

Ro-Tap® Accessories also available:

- **Ro-Tap® Maintenance Kits**
- **Ro-Tap® Test Stand**
- **Ro-Tap® Sound Enclosure**
- **Wet Test Kits**

LIMITED WARRANTY AND LIMITATION W.S. Tyler™ Industrial Group, Mentor, OH

W.S. Tyler warrants, commencing with the date of the first use and for a period of twelve (12) months thereafter, its Industrial Group Products to be free from defects in workmanship and materials. This warranty applies to the first purchaser.

If, within such warranty period, any new products shall be proved to W.S. Tyler's satisfaction to be defective, it shall be repaired, or at W.S. Tyler's option, replaced F.O.B. factory, without charges.

W.S. Tyler's obligation hereunder shall be confined to such repair or replacement and does not include any charges, direct or indirect, for shipping, removing, or installing defective products.

No warranty shall apply to used products nor to products which have been furnished, repaired or altered by others so as, in W.S. Tyler's judgment, to affect the same adversely or which shall have been subject to negligence, accident or improper care, installation, maintenance, storage or other than normal use or service.

W.S. TYLER'S EXPRESSED WARRANTY AND THE REMEDIES SET FORTH HEREIN ARE EXCLUSIVE AND NO OTHER WARRANTIES, GUARANTEES OR REMEDIES OF ANY KIND WHETHER STATUTOR, WRITTEN, ORAL, EXPRESSED, OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state. The liability of W.S. Tyler arising out of the manufacture, sale, delivery, use or resale of the product, whether based on warranty, contract, negligence, tort, strict liability or otherwise, and whether for direct, indirect, special, consequential, exemplary, punitive or other damage, shall not exceed the cost of replacement of the product. Upon the expiration of the warranty, all such liability shall terminate.

IN NO EVENT SHALL W.S. TYLER BE LIABLE FOR LOSS OF PROFITS, DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ATTRIBUTABLE TO DEFECTS IN MATERIAL FURNISHED, PRODUCT IDENTIFICATION, DELAYS IN DELIVERY, OR OTHERWISE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

© Copyright 2011, W.S. Tyler. All Rights Reserved.