

INSTRUCTION MANUAL
MODEL 3260
CONSTANT SPEED MIXER
(Original Instructions)

Revision R – March 2025
P/N: 3260-1050

S/N: _____



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General Information

Introduction

Purpose and Use

The Chandler Engineering Model 3260 Constant Speed Mixer is designed to provide mixing of cement slurries in accordance with API Specification 10. The mixer features a digital speed control and display with a built-in tachometer and programming capabilities. The built-in programs are set for mixing speeds of 4,000 and 12,000 RPM for use with the 1-liter cup. Alternately, the mixing speed may be adjusted manually via the built-in keypad. As the load varies, the speed control maintains the speed of the motor at the preset speeds.

The control enclosure is mounted below the mixing cup and motor for ease of use and display of the mixing speed.




Features and Benefits

- CE certified.
- Constant speed operation is easily observed by the digital display.
- Hardened mixing blades assure long life.
- Four programmable speed profiles. By default, these are set per API Spec 10:
 - 4,000 rpm for 15 seconds
 - 12,000 rpm for 35 seconds).
- Programmable speed profiles can be easily changed to any value between 1,000 and 20,000 rpm (in 100 rpm steps) for applications outside API Spec 10.
- Push button selection of variable speed allows mixing of shear-sensitive materials at desired speed.
- One continuous variable speed (1,000 to 20,000 rpm).
- Stainless steel container can withstand abrasive action when mixing cement at high speeds.
- Heavy-duty industrial-grade mixer assures its trouble-free and long life operation.
- No variation in thickening time test due to changes in shear rate.

Specifications

Input Voltage	(Model 3260-110V):	120 VAC
	(Model 3260-220V):	230 VAC
Input Current	(Model 3260-110V):	13A
	(Model 3260-220V):	6.5A
Frequency:		50/60HZ, 1 PHASE
Environment:		Indoor Use
Altitude:		2000 m
Temperature:		5 – 40 °C
Maximum Relative Humidity:		80 % for temperatures up to 31 °C decreasing linearly to 50 % at 40 °C
Maximum Operating Cycle:		1 minute ON / 3 minutes OFF
Container Material:		Stainless steel
Maximum Speed:		20,000 rpm
Speed Selection Switch:		Integral keypad to quickly select the desired speed
Constant Speeds:		Four independently adjustable speeds over a wide range of rpm, adjusted by Chandler to 4,000 and 12,000 rpm (per API Spec 10)
Adjustable Speeds:		From 1,000 to 20,000 rpm
Display:		Speed is displayed directly in rpm
Cabinet:		Stainless steel
Container Volume:		1 quart (1-liter)
Dimensions:		17” (43 cm) high x 9” (23 cm) wide x 10” (25 cm) deep
Net Weight:		15 lbs (7 kg)

Symbols Used on Equipment

Symbol	Meaning
	Protective Conductor Terminal
	Documentation must be consulted in all cases where this caution symbol is marked.
	Hot Surface

Safety Requirements

READ BEFORE ATTEMPTING OPERATION OF INSTRUMENT

The Chandler Engineering Model 3260 Constant Speed Mixer is designed for operator safety.

To ensure safety:

- If the instrument is not used in accordance with this manual, the safety of the instrument may be impaired.
- Locate the instrument in a low traffic area and ensure the cooling vent is not obstructed.
- Always position the instrument in such a manner that allows easy access to the power cord.
- Post signs where the instrument is being operated to warn non-operating personnel.
- Read and understand instructions before attempting instrument operation.
- Observe caution notes.
- Observe and follow the warning labels on the instrument.
- Always disconnect main power to the instrument before attempting any repair and before cleaning.
- Appropriately rated fire extinguishers should be located within close proximity.
- Avoid contact with moving parts.
- Don't remove container lid while operating the mixer.
- Don't remove the container while the motor is running.
- Always wear hearing protection when operating the mixer.

Before attempting to operate the instrument, the operator should read and understand this manual.

Where to Find Help

In the event of problems, contact your local sales representative or Chandler Engineering:

- Telephone: 918-250-7200
- Fax: 918-459-0165
- E-mail: chandler.sales@ametek.com
- Website: www.chandlereng.com

Instrument training classes are also available.

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Section 1 – Installation

Unpacking the Instrument

The following components are included with the complete 3260 system:

- Mixer base
- 1 Liter cup adapter
- Mixer drive shaft
- Mixer cup (1-Liter) with lid

Accessories supplied with instrument (check against accessory list inside the packing).

NOTE: Verify all parts listed on packing slip have been shipped with instrument. If parts are missing, contact Chandler Engineering.

Utilities Required

Model 3260-110V:	120 VAC
Model 3260-220V:	220 VAC

Tools/Equipment Required

None required

Setting up the Instrument

1. Install the rubber adapter over the adapter shaft.
2. Install the cup into the rubber adapter.
3. Connect the power cord from the mixer base to an appropriately rated power source in accordance with local wiring codes.

CAUTION: Wear hearing protective when using the mixer.

CAUTION: Check your power supply against your Model 3260 system power rating. Damage can occur if incorrect line voltage is applied.

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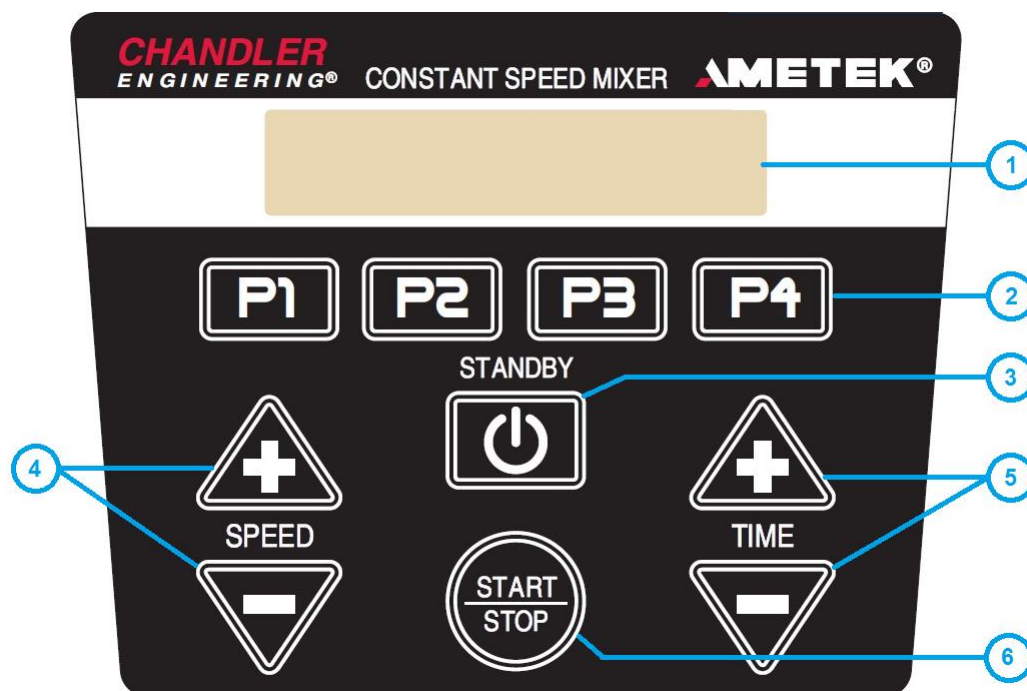
Section 2 – Operating Instructions

Operation

The control enclosure includes four program buttons (P1-P4) located just below the display. All program buttons are preset at 4,000 RPM for 15 seconds followed by 12,000 RPM for 35 seconds. These buttons may be programmed for up to 8 speed / time combinations (1,000 to 20,000 RPM and 0 to 999 seconds). Refer to the *Maintenance* section of this manual for additional information on how to reprogram the functionality of these buttons.

Alternatively, starting the mixer via the Start/Stop button allows the speed to be manually controlled via the Speed +/- buttons for continuous operation of the motor (up to 9999 seconds).

Front Panel Description



1. LCD Display – Displays current speed, mixing time and allows setup, programming, etc.
2. Program Buttons – Allows the mixer to operate at preset speeds for preset time intervals.
3. Power On/Off (Standby) Button – Turns the power on/off.
4. Manual Speed Control Buttons – Controls the mixer speed. If idle, the Start/Stop button must be pressed to run at the prescribed manual speed.
5. Time +/- Buttons – Used for configuring the mixer and setting program parameters.
6. Start/Stop Button – Stops the mixer if it is currently running. Starts the mixer in manual speed control mode if it is currently stopped.

Mixing a Cement Slurry

CAUTION: Wear eye protection when using the mixer.

NOTE: These instructions assume that the Program Button has not been changed from the factory default schedule.

1. Measure the amount of water and pour into the mixer cup.
2. Using a scale, measure the amount of cement.
3. Turn the power/standby switch to on (LCD display illuminated).
4. Press a Program Button (P1 through P4). The motor will operate at 4,000 RPM.
5. Add the measured cement into the mixer cup as the water is mixed.
6. Replace the mixer cup cover prior to the expiration of the 15 second timer.
7. When the timer has expired, the mixer will automatically increase speed to 12,000 RPM. The motor will turn off when the timer countdown (35 seconds) has ended.

NOTE: Mixer should run for 15 seconds at low speed (4,000 RPM) and for 35 seconds at high speed (12,000 RPM) in accordance with API Specification 10.

WARNING: Following operation, the mixer cup could be hot. Always use a protective thermal glove to grip the handle to prevent burns.

Resetting Thermal Protection

- The 3260 Mixer is equipped with an automatic reset switch to protect the motor from overheating.
- If the mixer stops running due to heavy use, push the “STANDBY” button and unplug the power cord. Empty the mixer cup and allow approximately 5 to 10 minutes for the motor to cool down.
- Plug the power cord back into the outlet and continue mixing.
- If the 3260 mixer does not function properly following this procedure, discontinue use and contact a Chandler Engineering Technical Sales representative.

Section 3 – Maintenance

Tools Required

Basic hand tools.

Cleaning and Service Tips

Most of the problems that occur with the 3260 mixer motor are due to inadequate cleaning of the mixing blade assembly. If the blade assembly becomes contaminated with cement, the assembly will bind and cause the motor to over heat. The blending assembly, mixing cup and mixer base should be thoroughly cleaned after each use. *As long as the cement doesn't set up, the blending assembly, mixing cup and mixer base can be washed with soapy water using Dishwashing liquid. Rinse with water and dry thoroughly.*

Blending Assembly (if it is necessary to remove from cup):

- *Remove from mixing cup. **NOTE:** Blades are sharp. Handle with care.*
- *Wash using soapy water.*
- *Ensure all cement has been removed.*
- *Rinse with water and dry thoroughly.*

Mixing Cup:

- *Remove mixing cup from mixer base.*
- *Remove lid.*
- *Wash lid and mixing cup using soapy water. **NOTE:** If Blending Assembly hasn't been removed, the blades are sharp. Handle with care.*
- *Ensure all cement has been removed.*
- *Rinse with water and dry thoroughly.*

Mixing Base:

- *Unplug power cord.*
- *Remove mixing cup from mixer base.*
- *Wipe down exterior surfaces of mixer base with soft cloths or sponges dampened with soapy water. Prevent liquid from running into mixer base.*
- *Allow mixer base to air-dry before using.*

Calibration Procedure

The mixing speed can be checked using a traceable tachometer.

Maintenance Procedures

Changing the Blade Assembly

To change the blade assembly, follow the procedure below:

1. Remove the nut on the bottom outside with a 7/8" socket, pull the blade assembly through the cup.
2. Remove the small "acorn" nut with a 3/8" wrench.
3. Replace blade with a new one.
4. Tighten acorn nut onto new blade.
5. Reinsert the blade assembly through the cup.
6. Tighten the nut on the bottom outside.

Changing a Program (P1 – P4)

The mixer is equipped with four program buttons (P1-P4), which can be reprogrammed for any speed and mixing time. A program can have from one to eight sequential steps, each consisting of a mixing speed and timer count.

1. To enter program mode, press the Speed +/- buttons simultaneously.
2. Press the program button to be reprogrammed (P1-P4).
3. Select a speed using the Speed +/- buttons.
4. Press the Start/Stop button.
5. Select a mixing time using the Time +/- buttons.
6. Press the Start/Stop button.
7. To assign more speeds to be executed in sequence, press the Start/Stop button and repeat steps 3 through 6.
8. To save the program and exit programming mode, press and hold the Speed +/- buttons simultaneously.

Adjusting Operational Parameters (Advanced)

The mixer is equipped with factory default values for all operational parameters, which have been carefully selected for optimal operation of the unit. Although instructions for doing so are included here, it is generally not required or recommended to change these values.

1. To enter configuration mode, press the Time +/- buttons simultaneously for several seconds.
2. A parameter list will appear. To scroll through the list, use the Speed +/- buttons.
3. To select a parameter, use the Start/Stop button.
4. To adjust the value of the selected parameter, use the Speed +/- buttons.
5. To accept the new value, press the Start/Stop button.
6. The parameter list will reappear. To scroll through the list and select other parameters, use the Speed +/- keys.

7. To save the new settings and exit configuration mode, press and hold the Time +/- keys simultaneously.

The available parameters for adjustment are listed below, along with their factory default values.

- Speed Pb Value (Proportional band for PID control loop): 24600
- Speed Ti Value (Integral/reset time for PID control loop): 12300
- Speed Td Value (Derivative time for PID control loop): 12300
- ACCELERATION: 2,000
- DECELERATION: 2,000

To restore Factory Defaults (this will restore default programs and PID values):

- Unplug the mixer
- Hold down the P1 and P4 buttons
- Plug in the mixer. The mixer screen will show “STUCK KEY” and “POWER OFF” and the backlight will strobe at 1Hz (turn off and on every second).
- Release P1 and P4; the backlight will stop strobing.
- Unplug the mixer and then plug it back in.

Maintenance Schedule

MAINTENANCE SCHEDULE INSTRUMENT NAME					
COMPONENT	EACH TEST	MONTHLY	3 MONTHS	6 MONTHS	ANNUAL
Blending Assembly	Clean and Inspect for wear and leaks				
Mixing Cup	Clean				
Control Base	Clean				
Mixer Motor	Clean				
Blending Blade				<ul style="list-style-type: none"> ● Inspect and Replace Blending Blade (10% or greater weight loss may result in a thickening time change of 10% or greater) 	
O-Ring	Inspect and replace if broken				
<p>This maintenance schedule applies to normal usage of two tests per day. Detailed procedures for these operations are contained in your manual.</p> <ul style="list-style-type: none"> ● Per API Specifications σ Where Applicable 					

Section 4 - Replacement Parts

Part Number	Description
30-0048	Blending Assembly
30-0049	Hardened Blade
30-0056	Container
C19032	Adapter, waring 1 liter cup
30-0210	Mixer Base, 110V
30-0211	Mixer Base, 220V
P-1798	O-ring

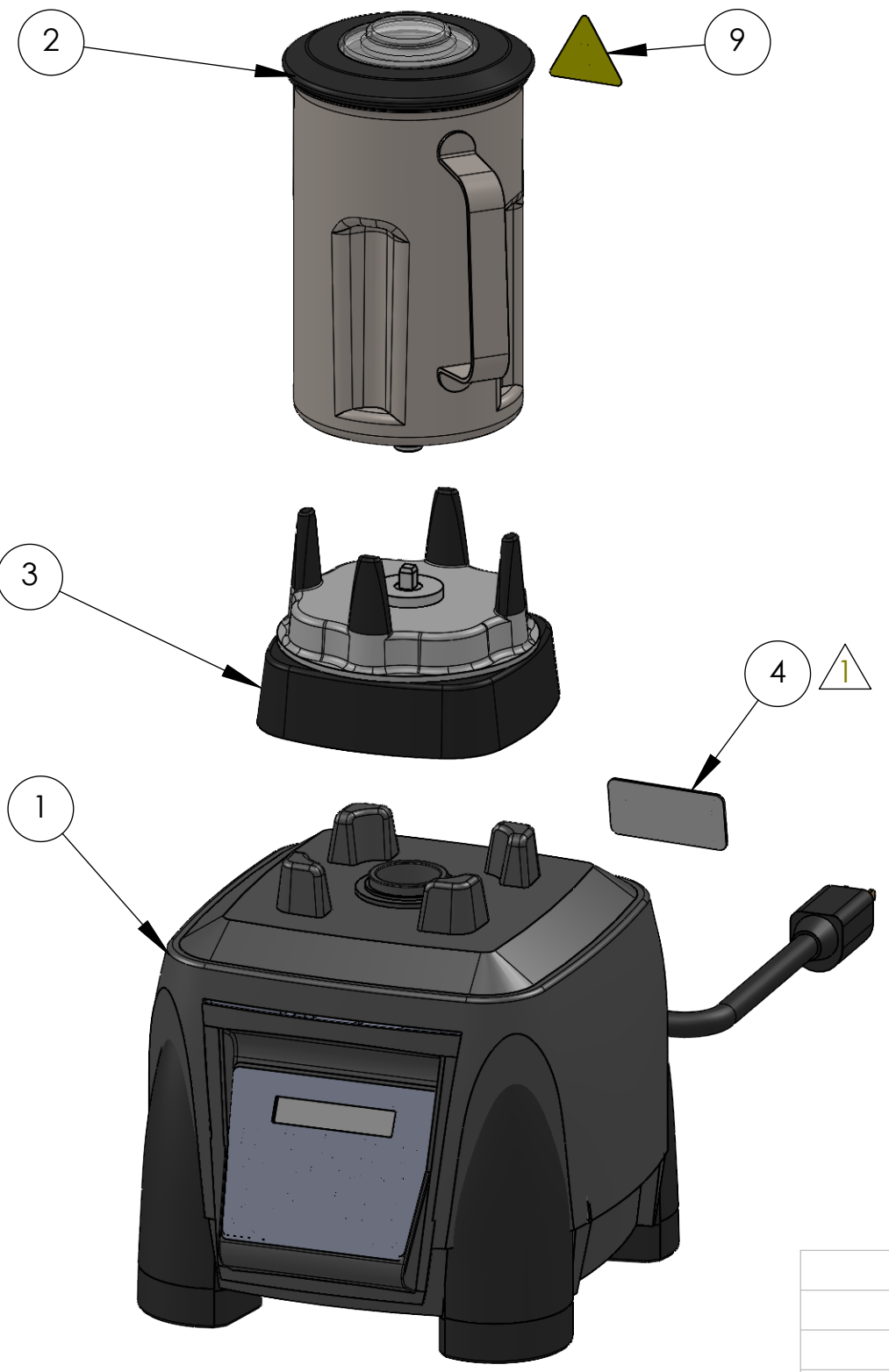
To ensure correct part replacement, always specify Model and Serial Number of instrument when ordering or corresponding.

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Section 5 - Drawings and Schematics

Drawing Number	Description
3260-110V	Mixer, 1-QT, 110V
3260-220V	Mixer, 1-QT, 220V

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	E	ECN T5559' ADDED MANUAL	10/9/13	TC
	F	ECN T5688; ADDED C15746	1/3/14	TC
	G	ECN T6587; UPDATED ASSEMBLY VIEW	4/13/15	TC
	H	ECN T9782, C19032 WAS 30-0180	2/9/2024	BCH



NOTES:
 1. STAMP LABEL WITH SERIAL NUMBER AND DATE.
 2. TEST PER PROCEDURE 30-0224.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	30-0210	BASE,MIXER,110V	1
2	30-0056	CONTAINER,1QT,SS ASSEMBLY	1
3	C19032	ADAPTER,WARING 1 LITER CUP ON MX BASE	1
4	30-0214	LABEL,MIXER,120V	1
5	3260-ACCESS	ACCESSORIES,3260	1
6	30-0224	TEST PROCEDURE	REF
7	30-0225	PROC: FIRMWARE UPDATE	REF
8	3260-1050	MANUAL, 3260	1
9	C15746	LABEL,WARNING,HOT SURFACE HAZARD,1.00" BASE	1
10	3260-110V-LABEL	LABEL PLACEMENT, MIXER	REF

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	
TOLERANCES:	
1 PLACE	±0.030
2 PLACE	±0.010
3 PLACE	±0.005
ANGLES	±1/2°
SURF. FINISH	32 ✓
NEXT ASSY	USED ON
APPLICATION	
BREAK SHARP EDGES, DEBURR	
APPROVALS	DATE
DRAWN: TRB	7/3/12
CHECKED: JF	7/10/12
ENGR.: TRB	7/3/12

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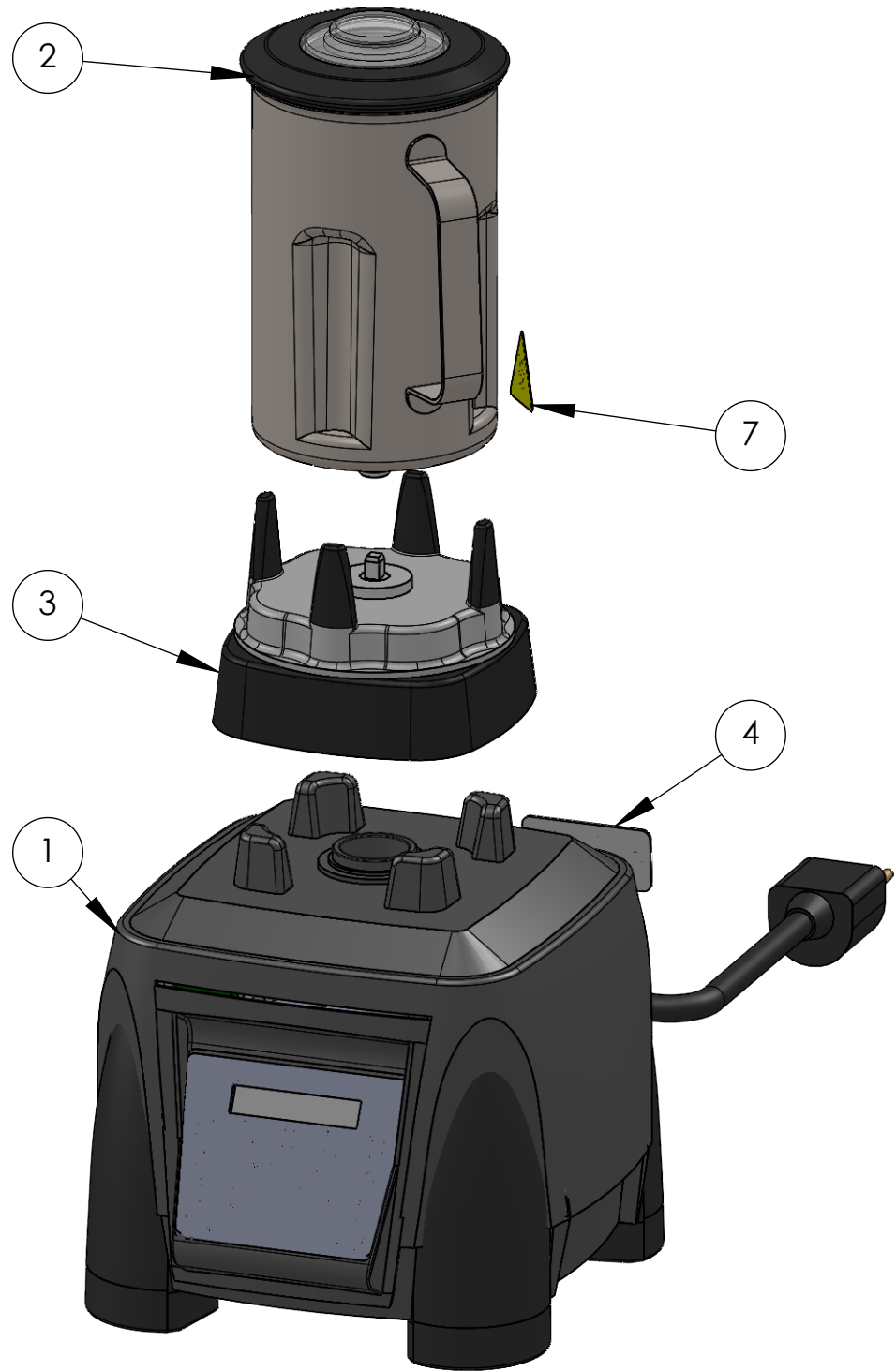
TITLE		MIXER,1-QT,110V	
SIZE	DWG NO.	REV.	
B	3260-110V	H	
SCALE: 1:3	TITLE BLOCK REV: 2.0	SHEET: 1 of 1	

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NOTES:

1. STAMP LABEL WITH SERIAL NUMBER AND DATE.
2. TEST PER PROCEDURE 30-0224.
3. SEND 3260-5000 DoC WITH INSTRUMENT.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	E	ECN T5481; ADD 30-0225	8/16/13	TC
	F	ECN T5559; ADDED MANUAL	10/9/13	TC
	G	ECN T6587; UPDATED ASSEMBLY VIEW	4/13/15	TC
	H	ECN T8153; ADDED 3260-5000 TO BOM	7/11/2018	JS
	J	ECN T9782; C19032 WAS 30-0180	2/9/2024	BCH



ITEM	PART NUMBER	DESCRIPTION	QTY	UoM
1	30-0211	BASE,MIXER,220V	1	
2	30-0056	CONTAINER,1QT,SS ASSEMBLY	1	
3	C19032	ADAPTER,WARING 1 LITER CUP ON MX BASE	1	
4	30-0215	LABEL,MIXER,230V	1	
5	3260-ACCESS	ACCESSORIES, 3260	1	
6	30-0224	TEST PROCEDURE	REF	
7	C15746	LABEL,WARNING,HOT SURFACE HAZARD,1.00" BASE	1	
8	3260-220V-LABEL	LABEL PLACEMENT, MIXER	REF	
9	30-0225	PROC: FIRMWARE UPDATE	REF	
10	3260-1050	MANUAL, 3260	1	
11	3260-5000	DECLARATION OF CONFORMITY, MODEL 3260	REF	

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	
TOLERANCES:	
1 PLACE	±0.030
2 PLACE	±0.010
3 PLACE	±0.005
ANGLES	±1/2°
SURF. FINISH	32
NEXT ASSY	USED ON
APPLICATION	
BREAK SHARP EDGES, DEBURR	
APPROVALS	DATE
DRAWN: TRB	7/3/12
CHECKED: JF	7/10/12
ENGR.: TRB	7/3/12

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TITLE: MIXER, 1-QT, 220V

SIZE: B DWG NO.: 3260-220V REV. J

SCALE: 1:3 TITLE BLOCK REV: 2.0 SHEET: 1 of 1

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Please Send Us Your Comments on This Manual

Model Number _____ Serial Number _____

Printing Date of this manual (from the Title Page) _____

Please circle a response for each of the following statements. Use:

(1)= Strongly agree (2) =Agree (3) =Neutral, no opinion (4) =Disagree (5) =Strongly disagree

- | | | | | | |
|---|---|---|---|---|---|
| a) The manual is well organized. | 1 | 2 | 3 | 4 | 5 |
| b) I can find the information I want. | 1 | 2 | 3 | 4 | 5 |
| c) The information in the manual is accurate. | 1 | 2 | 3 | 4 | 5 |
| d) I can easily understand the instructions. | 1 | 2 | 3 | 4 | 5 |
| e) The manual contains enough examples. | 1 | 2 | 3 | 4 | 5 |
| f) The examples are appropriate and helpful. | 1 | 2 | 3 | 4 | 5 |
| g) The manual layout is attractive and useful. | 1 | 2 | 3 | 4 | 5 |
| h) The figures are clear and helpful. | 1 | 2 | 3 | 4 | 5 |
| i) The sections I refer to most often are _____ | | | | | |

Other comments _____

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Please add me to your mailing list-

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My instrument is Chandler Model _____

Serial Number _____



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All products of Chandler Engineering are warranted for a period of one year from the date of shipment to be free from defective workmanship and material. Providing written notice is made and authorization by us is given, any of our products claimed to be defective may be returned freight prepaid to our factory. If found to be defective and after examination by us, our obligation will be limited to repairing or replacing the product, at our option, free of charge, F.O.B. our factory.

COMMERCIAL INSTRUMENTATION MANUFACTURED BY OTHERS

Commercial instrumentation manufactured by others is covered by separate manufacturer warranty, generally for one year. Contact Chandler Engineering for instructions on obtaining the service directly from the manufacturer.

Our warranty does not cover damage or failure caused by abuse, misuse, abnormal usage, faulty installation, improper maintenance, or any repairs other than those provided by authorized Chandler Engineering personnel.

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