

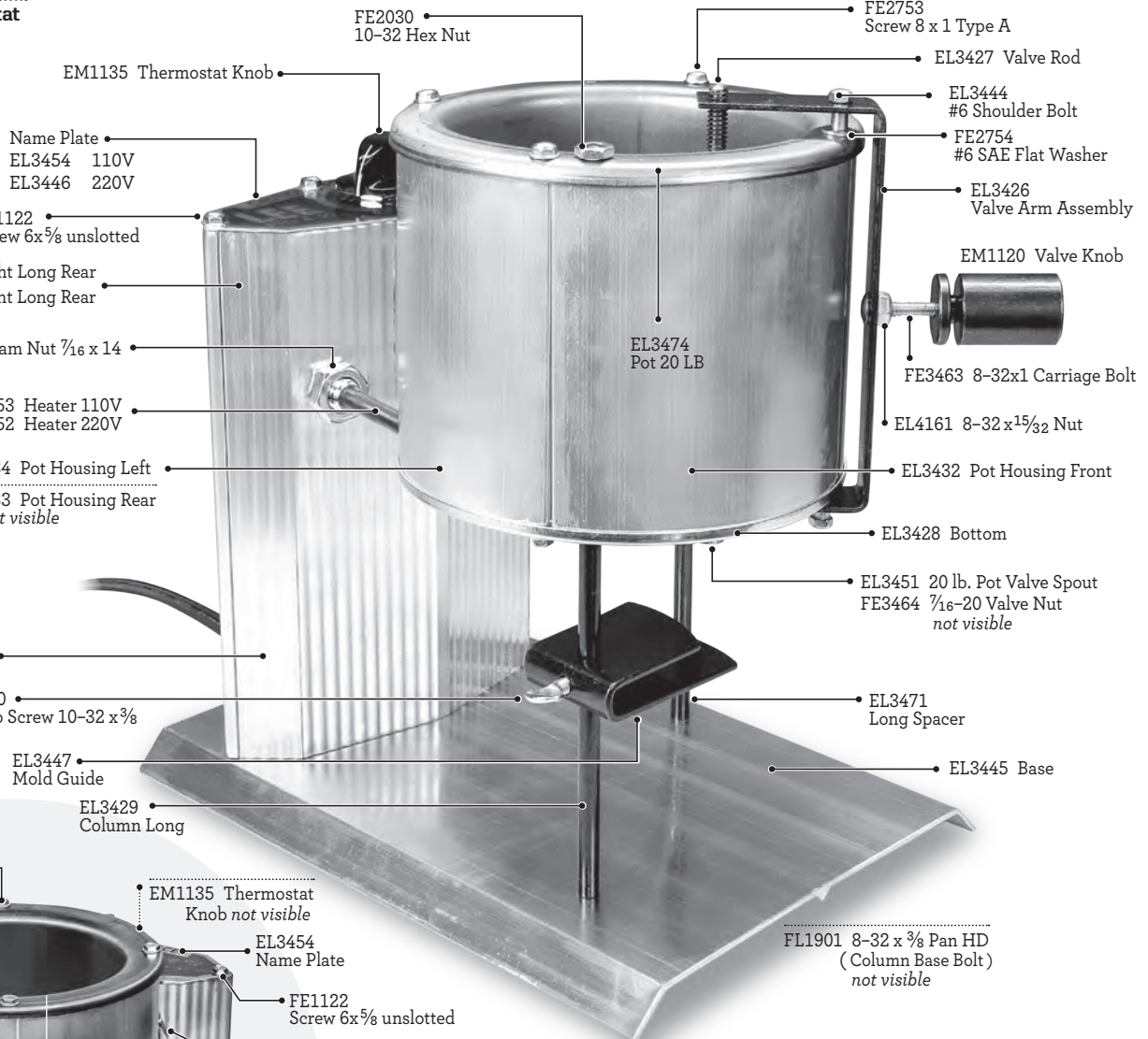
# LEE PRO 20 SERIES MELTERS

The most advanced design melters made

Symmetrical reflective housing allows quick melting with low current requirements. The flow control valve is the easiest to adjust and features valve rod that can be rotated 360° for quick reseating.

## Pro 20 & Magnum Melter Thermostat

Inside upright | not visible  
 EL3466 Thermostat 110V  
 EM1133 Thermostat 220V  
 EM1115 Heater Clamp  
 EM1129 Jumper 3½" 18 Ga



Name Plate  
 EL3454 110V  
 EL3446 220V

FE1122  
 Screw 6x5/8 unslotted

EL3437 110V Upright Long Rear  
 EL3509 220V Upright Long Rear

FE1116 Jam Nut 7/16 x 14

EL3453 Heater 110V  
 EL3452 Heater 220V

EL3434 Pot Housing Left  
 EL3433 Pot Housing Rear  
 not visible

EL3436 Upright Long Front

FE3470  
 Thumb Screw 10-32 x 3/8

EL3447  
 Mold Guide

EL3429  
 Column Long

## MAGNUM MELTER

FE2753  
 Screw 8 x 1 Type A

FE2030  
 10-32 Hex Nut

EL3021  
 Pot 20 LB

EL3432  
 Pot Housing Front

EL3430  
 Column Medium

EL3445 Base

EM1135 Thermostat  
 Knob not visible

EL3454  
 Name Plate

FE1122  
 Screw 6x5/8 unslotted

FE1116 Jam Nut 7/16 x 14

EL3434 Pot Housing Left  
 EL3433 Pot Housing Rear  
 not visible

EL3438  
 Upright Med Front  
 EL3439 Upright Med Rear  
 not visible

EL3403  
 Medium Spacer

FL1901 8-32 x 3/8 Pan HD  
 (Column Base Bolt)  
 not visible

## Pro 20 & Magnum Melter Cord

Cordset  
 EM1127 110V  
 EM1128 220V  
 Bushing Cord  
 EM1117 110V  
 EM1118 220V  
 EL3469 Instructions

**NOTE**  
 Does not ship  
 with plug  
 on cord

## CAUTION

Be extremely careful not to get any water into the molten lead. Even a small drop will explode into steam and violently spatter hot lead.

Wear safety glasses while using.

Use only in areas of adequate ventilation. Air flow sufficient to carry away the smoke of an extinguished match is considered adequate.

Keep food and drink out of work area. Wash hands before eating or smoking.

If the pot is allowed to cool full of metal, the spout will likely drip during heat up. Be sure to place an ingot mold under spout to catch drips.

EL3469

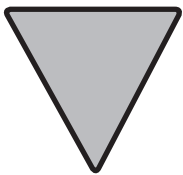
## Guarantee

Lee Precision products are guaranteed not to wear out or break from normal use for two full years or they will be repaired or replaced at no charge if returned to the factory. Any Lee product of current manufacture regardless of age or condition will be reconditioned to new, including a new guarantee, if returned to the factory with payment equal to half the current factory list price.

Date Purchased \_\_\_\_\_

# LEE

LEE PRECISION, INC.  
 4275 Hwy. U · Hartford WI 53027  
 www.leeprecision.com



### WARNING

**Melting lead and casting lead objects will expose you and others in the area to lead, which is known to cause birth defects; other reproductive harm and cancer.**

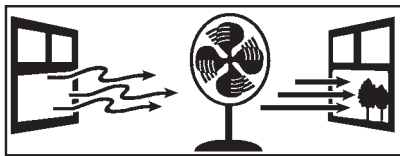
## Reducing Exposure

Lead contamination in the air, in dust and on your skin is invisible.

**Keep children and pregnant women away during use and until clean up is complete.**

Risk can be reduced—but not eliminated—with strong ventilation; washing hands immediately after use of these products before eating or smoking; and careful cleaning of surfaces and floors with disposable wipes, after lead dust has had a chance to settle. Use a lead-specific cleaner with EDTA, or a high-phosphate detergent (like most detergents sold for electric dishwashers), and bag wipes for disposal.

Use strong ventilation



## Set Up

**SCREW** knob onto valve arm stud.

**PLACE** the melter on a stable work bench or table. Do not place in a draft or allow a fan to blow directly on the pot.

**ROUTE** the power cord so it will not be tripped over, or pulled by a child.

**PLACE** an ingot mold or small metal can under the pour spout during warm up.

**FILL** the pot with desired casting alloy.

**SET** mold guide for proper height and rotate mold guide forward or backward for proper right to left alignment. [NOTE This feature available only on PRO 4 Series] Best results with bottom pour pots are obtained by holding the mold away and slightly off center of the pour spout.

**SET** heat control to HIGH and plug in.

## Directions

It will take about 20–30 minutes to heat 20 lbs. of metal to 600 degrees; line voltage greatly affects melt time. After the metal is melted, adjust heat setting to desired position. The markings are reference numbers only and do not indicate temperature. The high setting will stabilize at approximately 900° F. and the low about 450° F. Cast at the lowest temperature that will give good fill out. 650° F. is a good starting point.



With an ingot mold placed under the pour spout, lift the pour knob and observe the flow. Rotate the valve rod clockwise to decrease flow. As the metal is consumed, you will need to rotate the valve rod counterclockwise to maintain a uniform flow. Do not rotate the valve rod too far counterclockwise as continuous flow will occur. As the valve spout ages, it may corrode or accumulate debris. Should your valve begin to drip,

rotate the valve rod with a screwdriver—this will force out any debris or corrosion from between the valve rod and seat. The metal should be fluxed whenever more metal is added to the pot. A small piece of wax about the size of a pea works well as a flux. Be prepared for a flame when the wax is added to the pot. Stir the metal vigorously and scrape the side and bottom of the pot to dislodge impurities, which will float and can be skimmed off and discarded properly.

The following metals **can not** be melted in this pot

■ GOLD ■ SILVER ■ ZINC ■ COPPER ■ PEWTER ■ ALUMINUM

## Tips

Leaving a thin layer of oxidized metal on the surface will cause no harm when using the melter as a bottom pour pot and will slow further oxidation of your metal. Flux and skim only after adding more metal to the pot.

Before storing your melter for extended periods, spray all steel parts with a silicone spray or rust inhibitor, like WD-40.

Store your melter with about an inch of metal in the bottom. It speeds the next melt and reduces the likelihood of carrying surface contamination through the valve.

## Troubleshooting

Should the valve not pour when the knob is raised, it's most likely caused by the heat being set too low or the valve rod rotated too far clockwise. If you're sure the heat is set high enough and flow control is open, the spout is likely plugged with sediment. With the melter at operating temperature, hold a straightened paper clip with a pliers and feed the wire up the spout opening to force out the obstruction.

Should the valve drip, simply rotate the valve with a screwdriver. If this does not cure the drip, check the valve linkage for binding due to corrosion or damage. The moving points of the valve linkage should be lubed with a high temperature anti-sieze lubricant, like Permatex #133 or equivalent, found at any automotive or well-stocked hardware store.

## Rule of Thumb for Hardening Lead

For every 1% additional tin, Brinell hardness increases 0.29

For every 1% additional antimony, Brinell hardness increases 0.92

Sample equation:

Brinell = 5 Brinnell Pure Lead + (0.29 x Tin percentage) + (0.92 x Antimony percentage)

For example, if you increase the amount of tin by 10% and the amount of antimony by 5%, the Brinell hardness of your lead will be 12.5

Brinell hardness 12.5 = 5 + (0.29 x 10) + (0.92 x 5)

**Don't risk handling molten metal in a makeshift container. Use the Lee Ingot Mold to cast 1/2 and 1-lb. ingots. Perfect for remelting and alloying. Wood handle stays cool. Aluminum construction is lightweight and rustproof.**



PART #90029

Send your name and address for complete catalog.

# LEE

LEE PRECISION, INC.

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