

# Pilsner - All Grain Kit - Robobrew V3 35L

## Beer Stats

Efficiency:	72% (brew house)				
Method:	All Grain				
Pre Boil Gravity:	1.043 (recipe based estimate)				
Boil Time:	60 min				
Style:	German Pilsner (Pils)				
Post Boil Gravity:	1.049 (recipe based estimate)				
Batch Size:	23 liters (fermentor volume)				
Original Gravity:	1.049	Final Gravity:	1.014	ABV (standard):	4.5%
Gravity:		IBU (tinseth):	33.3	SRM (morey):	3.0
Mash pH	5.8	Cost	n/a		



## Setup

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- Double check that all ingredients are on hand.
- Ensure all equipment is on hand (hydrometer, sanitizer, fuel, fermentor, kettle, air lock, hops bags, hoses, funnel, towel, etc).
- Make sure valves are closed on HLT, mash tun, and brew kettle.
- This recipe calls for 32 L of water given the recipe and your equipment profile.
- Begin heating strike water in hot liquor tank (HLT) or secondary kettle.
- Add brewing salts as recipe calls for or to style.
- Weigh out and mill grains if not already milled.
- Clean workspace, setup mash tun and kettle and ensure they are clean.
- Prepare hops additions.
- Take yeast out of fridge if using liquid ale yeast.

## Mash

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- Strike water volume is 23.99 L at 3 L/kg mash thickness. 67 °C for 60 min
- When strike water is ready, pre-heat tun, begin dough-in procedure.
- Mash Step 1 (Strike) Heat 23.99 L to 68 °C, and Mash at 67 °C for 60 min.
- Mash Step 2 (Sparge) Sparge with 7.98 L at 76 °C for 15 min.

## Boil

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- Expected pre-boil volume of 27.2 L needed to hit batch size target.
- Collect pre-boil gravity sample (Expected 1.043). Record the value when it has cooled down.
- Fire the kettle and bring to a boil. Stir well as hot break occurs to avoid boil over.
- Start boil timer, set for 60 minutes.
- Add 3 oz of Saaz at 50 min.
- Add 0.5 each of Whirlfloc at 15 min.
- Begin sanitizing counterflow chiller and hoses at 10 min.
- Begin sanitizing lid of kettle at 10 min.
- Boil complete. Flame out.

## Finish

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- Cool wort down to ~53 °F / 12 °C.
- Sanitize primary fermenter, cork, air lock, aeration stone/hose, funnel, wine thief.
- When wort is cooled to ~53 °F / 12 °C, transfer wort into fermenter.
- Aerate wort by shaking, rocking, splashing, or with aeration stone.
- Take gravity reading (Expected 1.049).
- Pitch yeast.
- Fit with airlock or blow off tube for high gravity or dark beers.
- Move fermenter to temperature stable area protected from light.
- Clean up equipment.