

## pils

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **34**
- SRM **4**
- Style **Bohemian Pilsener**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **13.8 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **20 min** at **76C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.8 kg (82.6%)	81 %	4
Grain	Monachijski	0.5 kg (10.9%)	80 %	16
Grain	Weyermann - Carapils	0.3 kg (6.5%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	70 min	13.5 %
Boil	Saaz (Czech Republic)	15 g	60 min	4.5 %
Boil	Saaz (Czech Republic)	15 g	10 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	20 g	0 min	4.5 %