

## pils z PK

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- Gravity **9.3 BLG**
- ABV **3.6 %**
- IBU **40**
- SRM **4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **46 C**, Time **0 min**
- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **50.3C**
- Add grains
- Keep mash **0 min** at **46C**
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

### Fermentables

| Type  | Name                              | Amount       | Yield | EBC |
|-------|-----------------------------------|--------------|-------|-----|
| Grain | Weyermann - Bohemian Pilsner Malt | 4.5 kg (90%) | 81 %  | 4   |
| Grain | Strzegom Monachijski typ I        | 0.5 kg (10%) | 79 %  | 16  |

### Hops

| Use for             | Name                  | Amount | Time   | Alpha acid |
|---------------------|-----------------------|--------|--------|------------|
| Boil                | Marynka               | 30 g   | 60 min | 10 %       |
| Aroma (end of boil) | Saaz (Czech Republic) | 30 g   | 10 min | 4.5 %      |

### Yeasts

| Name | Type  | Form | Amount | Laboratory |
|------|-------|------|--------|------------|
| w34  | Lager | Dry  | 23 g   | ---        |