

# pierwszy pils

- Gravity **13.6 BLG**
- ABV ---
- IBU **28**
- SRM **4.4**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **55 C**, Time **20 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **20 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount      | Yield | EBC |
|-------|---------------------|-------------|-------|-----|
| Grain | Strzegom Pilzneński | 5 kg (100%) | 80 %  | 4   |

## Hops

| Use for | Name                  | Amount | Time     | Alpha acid |
|---------|-----------------------|--------|----------|------------|
| Boil    | Saaz (Czech Republic) | 30 g   | 60 min   | 4.5 %      |
| Boil    | Saaz (Czech Republic) | 20 g   | 30 min   | 4.5 %      |
| Boil    | Saaz (Czech Republic) | 20 g   | 10 min   | 4.5 %      |
| Dry Hop | Ahtanum               | 30 g   | 4 day(s) | 5 %        |

## Yeasts

| Name | Type  | Form | Amount | Laboratory |
|------|-------|------|--------|------------|
| s-23 | Lager | Dry  | 11.5 g | ---        |