

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 | --- |