

Dortmunder

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **49**
- SRM **4.6**
- Style **Dortmunder Export**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **26.5 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.6 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|-------|-----|
| Grain | Słód Pilsner® 2,5-4,5 EBC Weyermann | 3.7 kg (62.7%) | 80 % | 4 |
| Grain | Monachijski typ II 20-25 EBC Weyermann | 0.6 kg (10.2%) | 80 % | 20 |
| Grain | Weyermann - Carapils | 0.6 kg (10.2%) | 78 % | 4 |
| Grain | Pilzneński | 1 kg (16.9%) | 81 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------------------|--------|--------|------------|
| Boil | Magnum | 30 g | 60 min | 15.5 % |
| Boil | Hallertau Spalt Select | 10 g | 20 min | 3.9 % |
| Boil | Hallertau Spalt Select | 20 g | 5 min | 3.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|-------------|-------------|---------------|-------------------|
| Saflager S-23 | Lager | Dry | 11.5 g | Fermentis |