

Dortmunder

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **43**
- SRM **4.5**
- Style **Dortmunder Export**

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 **3.5 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **50 C**, Time **20 min**
- Temp **67 C**, Time **45 min**
- Temp **76 C**, Time **1 min**
- Temp **100 C**, Time **75 min**

Mash step by step

- Heat up **17.1 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **45 min** at **67C**
- Keep mash **1 min** at **76C**
- Keep mash **75 min** at **100C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|-------|-----|
| Grain | Pilzneński | 3.7 kg (75.5%) | 81 % | 4 |
| Grain | Monachijski typ II 20-25 EBC Weyermann | 0.6 kg (12.2%) | 80 % | 20 |
| Grain | Weyermann - Carapils | 0.6 kg (12.2%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Dr Rudi | 30 g | 50 min | 11.8 % |
| Boil | Mount Hood | 10 g | 20 min | 5.5 % |
| Aroma (end of boil) | Mount Hood | 20 g | 5 min | 5.5 % |

Yeasts

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