

## Rebel clone

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **22**
- SRM **21.2**
- Style **Munich Dunkel**

### 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 **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.9 liter(s)**
- Total mash volume **25.6 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **19.9 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **11.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	2 kg (35.1%)	79 %	22
Grain	Viking pilzneński	1.7 kg (29.8%)	80 %	5
Grain	Viking golden ale	1 kg (17.5%)	80 %	14
Grain	Viking Stód Red Ale	0.5 kg (8.8%)	70 %	70
Grain	Wyerman cararoma	0.3 kg (5.3%)	74 %	350
Grain	Weyermann - Carafa I	0.2 kg (3.5%)	70 %	690

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition DE	30 g	40 min	6 %
Boil	Tradition De	20 g	10 min	6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	11 g	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Fining	Whirfloc	5 g	Boil	10 min