

# Doppelbock

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- Gravity **20.2 BLG**
- ABV **8.9 %**
- IBU **23**
- SRM **8.7**
- Style **Doppelbock**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **36.4 liter(s)**

## Steps

- Temp **50 C**, Time **1 min**
- Temp **62 C**, Time **30 min**
- Temp **100 C**, Time **20 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **27.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **1 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **20 min** at **100C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (49.5%)	81 %	4
Grain	Strzegom Wiedeński	2 kg (22%)	79 %	10
Grain	Monachijski	2.3 kg (25.3%)	80 %	16
Grain	Caraamber	0.3 kg (3.3%)	75 %	59

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	10 %
Boil	Hersbrucker	30 g	20 min	3 %