

# koza

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- Gravity **16.6 BLG**
- ABV ---
- IBU **82**
- SRM **4.4**
- 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 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (66.7%)	81 %	4
Grain	Weyermann - Grodziski	0.5 kg (8.3%)	80 %	4
Grain	Pszeniczny	1.5 kg (25%)	85 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	60 g	90 min	11 %
Boil	Lublin (Lubelski)	20 g	30 min	4 %
Boil	Lublin (Lubelski)	40 g	3 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Dry	11 g	Safbrew