

## Black in black

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- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **57**
- SRM **32.6**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

### Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.5 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzński	3.5 kg (75.8%)	81 %	4
Grain	Płatki owsiane	0.4 kg (8.7%)	85 %	3
Grain	Strzegom Czekoladowy ciemny	0.3 kg (6.5%)	68 %	1200
Grain	Jęczmień palony	0.1 kg (2.2%)	55 %	985
Grain	Strzegom Karmel 150	0.315 kg (6.8%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	26 g	60 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	5 g	25 min	15 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	5 g	15 min	15 %