

## ręczna robota

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- Gravity **12.9 BLG**
- ABV ---
- IBU **45**
- SRM **40**
- Style **American Stout**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **18.6 liter(s)**

### Fermentables

| Type  | Name                             | Amount          | Yield | EBC  |
|-------|----------------------------------|-----------------|-------|------|
| Grain | Strzegom Pilzneński              | 2.95 kg (50.9%) | 80 %  | 4    |
| Grain | Strzegom Monachijski typ I       | 1.95 kg (33.6%) | 79 %  | 16   |
| Grain | Strzegom Czekoladowy 1200        | 0.3 kg (5.2%)   | 68 %  | 1202 |
| Grain | Strzegom Karmel 600              | 0.3 kg (5.2%)   | 68 %  | 601  |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.3 kg (5.2%)   | 73 %  | 1001 |

### Hops

| Use for             | Name      | Amount | Time     | Alpha acid |
|---------------------|-----------|--------|----------|------------|
| Boil                | lunga     | 33 g   | 60 min   | 11.6 %     |
| Boil                | Cascade   | 20 g   | 20 min   | 6 %        |
| Aroma (end of boil) | Cascade   | 36 g   | 0 min    | 6 %        |
| Dry Hop             | Endeavour | 30 g   | 3 day(s) | 7.5 %      |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |