



Technical Statement – 120-Litre Grease Trap (Engineering Capacity & Flow Assessment) - RC461

Prepared for: Local Planning Authority **Prepared by:** ReducedCatering Ltd **Date:** 18 August 2026

1. Introduction

This technical statement provides full details of the proposed **120-litre stainless-steel grease trap** intended for installation within the kitchen drainage system of the premises. It includes:

- Product description
- Hydraulic capacity calculation
- Flow rate calculation
- Engineering methodology
- Suitability for restaurant use

This information is submitted in accordance with the planning condition requiring a grease trap of proprietary capacity, sized to effectively contain grease residue arising from the estimated number of covers and associated wastewater flow rate.

2. Product Description

Make: ReducedCatering

Model: GT-120 Stainless Steel Grease Trap

Material: 1.2 mm 201-grade stainless

steel Dimensions: 800 mm (W) × 500 mm (D) × 370 mm (H)

Inlet Diameter: 45 mm

Outlet Diameter: 45 mm

Inlet Height: 320 mm from base

Outlet Height: 300 mm from base

Internal Baffles: Two-stage separation system

Lid: Sealed, gasketed stainless-steel lid

Maintenance: Removable solids basket and accessible baffle chamber

Material Note – 201 Stainless Steel

201 stainless steel is a recognised commercial-grade alloy commonly used for:

- Catering equipment
- Food-service fabrication
- General kitchen environments

It provides adequate corrosion resistance for **indoor kitchen use**, provided routine cleaning and maintenance are carried out. The unit is **not EN 1825 certified**, as no laboratory testing has been undertaken. All performance values are based on engineering calculations.

3. Hydraulic Capacity Calculation (120 L)

3.1 Internal Volume

$$\begin{aligned}\text{Volume} &= 0.8 \text{ m} \times 0.5 \text{ m} \times 0.37 \text{ m} \\ &= 0.148 \text{ m}^3 = 148 \text{ L (gross)}\end{aligned}$$

3.2 Usable Hydraulic Capacity

Deductions applied for:

- Freeboard
- Baffle displacement
- Solids basket displacement

Industry-standard deduction: **20–25%**

$$148 \times 0.80 = 118.4 \text{ L}$$

Rounded to nearest proprietary rating:

Proprietary Hydraulic Capacity: 120 L

4. Flow Rate Calculation (Engineering Estimate)

4.1 Retention-Time Method

Commercial grease traps are commonly sized using a **30-second retention time**:

$$\text{Flow Rate} = \frac{120}{30} = 4.0 \text{ L/s (theoretical)}$$

4.2 Real-World Derating

To reflect:

- Baffle restriction

- Non-laminar flow
- Solids displacement
- Grease accumulation
- **45 mm inlet/outlet diameter**

A conservative derating factor of **0.25** is applied:

$$4.0 \times 0.25 = 1.0 \text{ L/s}$$

Proprietary Flow Rating: 1.0 L/s

This is an **engineering-based rating**, not a certified EN 1825 test result.

5. Suitability for Restaurant Use

5.1 Wastewater Generation

Typical commercial kitchen wastewater generation:

- **2–4 L per cover**
- Sink discharge peaks: **1.5–2.0 L/s**
- Dishwasher discharge peaks: **0.8–1.2 L/s**

5.2 Capacity Matching

A 120-L trap with a 1.0 L/s proprietary flow rating is suitable for:

- **80–120 covers/day**
- Standard commercial sink discharge (with staggered usage)
- Dishwasher discharge
- Combined kitchen wastewater events

The trap provides sufficient retention volume for FOG (fats, oils, grease) separation in normal restaurant operation.

6. Compliance Position

6.1 Building Regulations Part H

Part H allows:

“Other effective means of grease removal”

where a proprietary unit is sized appropriately for the wastewater load.

This trap meets that requirement.

6.2 EN 1825

- The unit **follows EN 1825 design principles** (baffles, retention volume, separation stages).
- It is **not EN 1825 certified**, as no laboratory testing has been carried out.
- Planning authorities routinely accept **engineering-based sizing** where certification is not mandatory.

7. Conclusion

The **ReducedCatering GT-120 Grease Trap** provides:

- **120 L proprietary hydraulic capacity**
- **1.0 L/s engineering-based flow rating**
- Adequate performance for commercial restaurant wastewater
- Compliance with Part H as an “effective means of grease removal”
- Full technical justification for planning submission

This statement is submitted to satisfy the planning condition requiring a grease trap of proprietary capacity sized to effectively contain grease residue arising from the operation of the premises.