

## EXTRACTION SYSTEM FOR THE FOLLOWING AREAS:

### **1. WASTE DISPOSAL AREA EXTRACTION SYSTEM**

- Airflow required:  $0.40 \text{ m}^3/\text{s}$  ( $1\,425 \text{ m}^3/\text{h}$ )
- Static pressure:  $\geq 160 \text{ Pa}$  at fan outlet
- Fan selection: 250 mm inline centrifugal, 0.12 kW @ 1 500 rpm
- Duct:  $\varnothing 250 \text{ mm}$  (or  $300 \times 200 \text{ mm}$ ) - 10 m total, 2 elbows, roof cowl
- Grille:  $600 \times 300 \text{ mm}$ , back-draft damper, stainless mesh

### **2. ELECTRICAL COMPLEX EXTRACTION FANS SUBSTATION**

- $2 \times \varnothing 315 \text{ mm}$  wall axial fans, each  $0.26 \text{ m}^3/\text{s}$  @ 30 Pa, EC or speed-controllable.
- Duty achieved:  $0.52 \text{ m}^3/\text{s}$  ( $1\,870 \text{ m}^3/\text{h}$ )  $\approx 26 \text{ ACH}$ .
- Make-up air:  $0.45 \text{ m}^3/\text{s}$  via door undercut / transfer grille ( $0.45 \text{ m}^2$  free area).
- Power:  $2 \times 0.10 \text{ kW}$  motors

### **3. FIRE STATION EXTRACTION FANS ABLUTION**

- Airflow totals:  $0.34 \text{ m}^3/\text{s}$  ( $1\,224 \text{ m}^3/\text{h}$ )
- Fan duty:  $0.34 \text{ m}^3/\text{s}$  @ 150 Pa  $\rightarrow$  inline centrifugal  $\varnothing 250$ ,  $\approx 0.3 \text{ kW}$
- Ducts: 250 mm main (7 m), branches 200 / 160 / 125 mm (5–8 m each)
- Grilles:  $600 \times 250$  (Female),  $400 \times 200$  (Male),  $300 \times 150 \text{ mm}$  (Accessible)
- ACH achieved:  $\approx 12 \text{ ACH}$