

HME Single Duct Cabin Unit

Sound Attenuator And
Balancing Box



The Halton HME can be used for air distribution and sound attenuation in various applications such as suites and pantries. The unit operates as a plenum box with a balancing and measurement module inside but also fulfils fire safety requirements as standard cabin unit. The supply volume flow rate is determined during commissioning by using the measurement and adjustment device. The flow measurement tubes and control spindle can be accessed through the unit's outlet. Using the pressure difference readings between the measurement taps and the k coefficient, the corresponding volume flow rate can be calculated. Rotating the control spindle adjusts the volume flow rate until the desired setting is achieved.

- Recommended pressure range from 0 Pa to 200 Pa
- Airflow range 0 m³/h...500 m³/h
- Excellent choice to be used together with HFR/M
- Airflow adjustment with control spindle (MSM module)
- Airflow measurement tubes

- Can be used also as exhaust plenum
- MED approved for B-0/B-15 installations

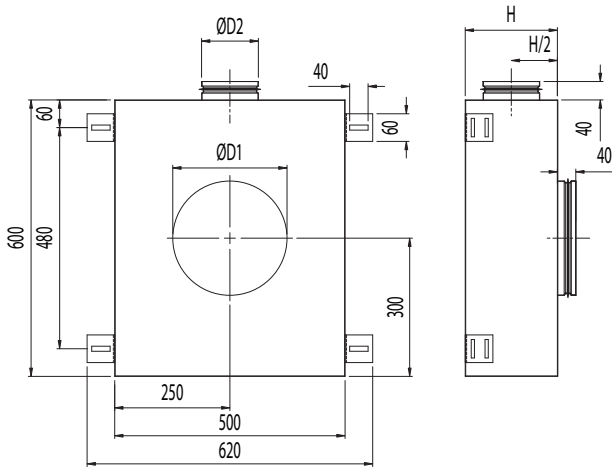
Additional features with reheat models

- 230 VAC ± 10%, max 10A, 50/60 Hz
- Triac controlled reheating coil(s), adjustable heating power (PWM) 0...100%
- Master/slave functionality: several slave cabin units can be connected to one master cabin unit
- Internal fuses 8A or 10A and 63 mA
- Network compatible with adapter
- All parameters can be preset at the factory or set onsite during commissioning by PDA
- All cable connections with fast connectors
- Easily tailored for different types of installations
- 90 °C manual reset safety switch with state detection indication to room thermostat
- HME cabin unit is supplied with room thermostat and interconnection cable

| PART | MATERIAL | PART | MATERIAL |
|------------|---------------------------------------|---|--|
| Casing | Hot galvanised steel | Reheat coil | AISI 304 |
| Spigots | Hot galvanised steel and EPDM rubber | Cables | Halogen free |
| Insulation | Mineral wool, s = 25 mm, MED approved | Measurement and adjustment module (MSM) | Body; aluminium, Plate; hot galvanized, Spindle; stainless steel, Tubes; polypropylene |
| I/O unit | Aluminium / plastic / electronics | | |

HME - Single Duct Cabin Unit, Sound Attenuator And Balancing Box

GENERAL HME drawing



DIMENSIONS TABLE

| HME Dimensions | | | |
|----------------|-----|-----------------|-----------------|
| | H | ØD1 male/female | ØD2 male/female |
| HME-125 | 200 | 199/201 | 124/126 |
| HME-160 | 220 | 249/251 | 159/161 |

Note:
 male connection: outer dimension
 female connection: inner dimensions

HME PRODUCT MODELS

HME unit

- For supply (with MSM module)
- For exhaust (with MEM module)

ROOM THERMOSTAT FEATURES

Halton Marine HME units are available with three different room thermostat models; with rotating knob, push buttons and touch buttons.

Common features

- Cabin temperature measurement
- Connector for PDA communication adapter to set cabin parameters
- PDA software for parameter setting and trouble shooting
- Different colour options and custom labeling available as an option
- Delivered with IC-Cable (interconnection cable)
 - For room thermostat - cabin unit connection
 - Prefabricated with plugs on both sides
 - Cable plug on thermostat side is designed to be pulled through standard installation pipe
 - Halogen free and flame retarding
 - Standard length 7 meters

Room thermostat with rotating knob

- Temperature adjustment by rotating knob

Room thermostat with push buttons

- Temperature adjustment by push buttons
- Self diagnose function
- LED intensity control and auto dimming

Room thermostat with touch buttons

- Temperature adjustment by touch buttons
- Self diagnose function
- LCD intensity control and auto dimming
- Display for actual and set point temperatures available as an option
- Time display available as an option
- A customized background picture available as an option
- Several frame options available



Room thermostat models; push button and rotating knob



Halton LCD room thermostat

ACCESSORIES FOR HME CABIN UNITS

MS-Cable (master-slave cable)

- For master cabin unit - slave cabin unit/units connection
- Prefabricated with plugs on both sides
- Halogen free and flame retarding
- Standard length is 7 meters

PDA Communication adapter

- Infrared or Bluetooth communication
- For wireless connection to set cabin unit parameters and trouble shooting
- One adapter per PDA needed

Network adapters

- Network adapter expands a stand-alone unit to network compatible unit (LON or Ethernet network)
- Enables supervision and advanced energy efficiency functions
- For more information, see Halton Networks for cabin ventilation -brochure

Reheaters available

- 800 W
- 400 W

Practical power level may be software adjusted cabin by cabin. Cable and power supply design has to be done according to maximum available heating power.

Airflows for HME cabin unit with reheat coil

| Minimum airflows | | |
|--------------------|-----------------------------------|---------|
| Reheater Power (W) | Min. airflows (m ³ /h) | |
| | HME-125 | HME-160 |
| 400 | 100 | 100 |
| 800 | 130 | 130 |

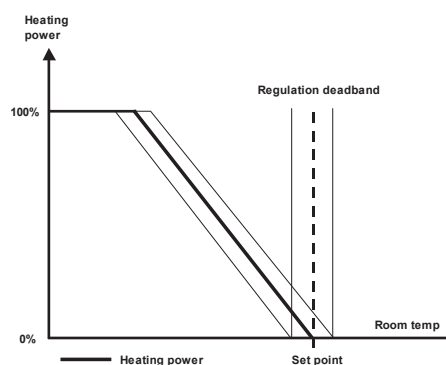
FUNCTION

Correct airflow for HME unit is set during commissioning by adjusting MSM/MEM device in inlet spigot. MSM/MEM is operated by flexible spindle which is easy to access from outlet.

Models with reheater

When passenger demands for warmer temperature by using room thermostat, the controller activates the electric reheater inside the cabin unit. When the required temperature in the cabin is achieved, the reference is held until the temperature demand changes.

Regulation Diagram with reheater



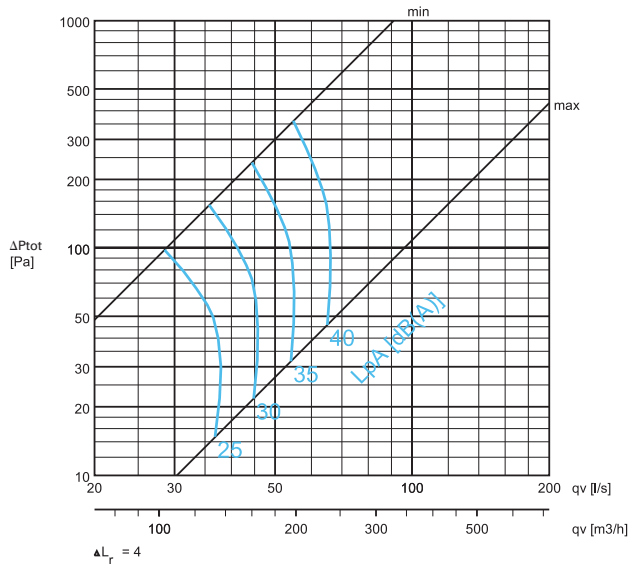
Operating range for HME

| HME | |
|--|--|
| HME-125 | HME-160 |
| 50 m ³ /h - 350 m ³ /h | 50 m ³ /h - 500 m ³ /h |

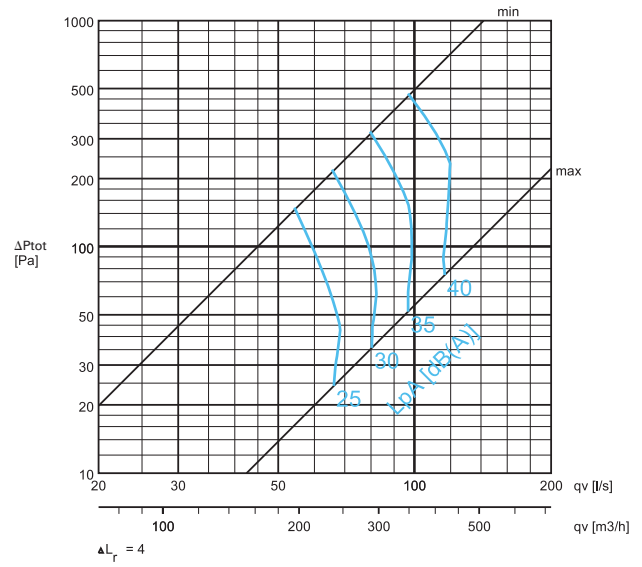
Performance data

Sound levels, cabin sound absorption 4 dB(A)

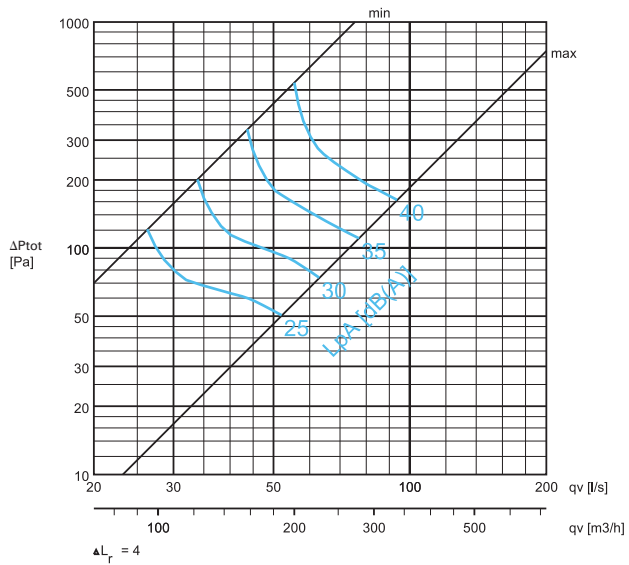
HME/A-125-200



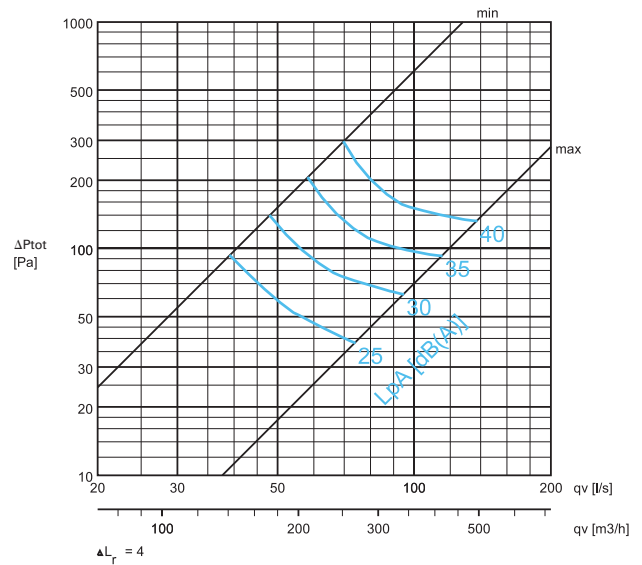
HME/A-160-250



HME/D-125-200



HME/D-160-250



Sound attenuation

Sound attenuation (dB)

HME 125 (600x500x200)

| f(Hz) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|-----------------|-----|------|------|------|------|------|------|------|
| ΔL (dB) | 6,4 | 11,3 | 15,9 | 25,8 | 34,8 | 37,9 | 35,3 | 34,7 |

ΔL : Sound attenuation not including end reflection

Sound attenuation (dB)

HME 160 (600x500x220)

| f(Hz) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|-----------------|-----|-----|------|------|------|------|------|------|
| ΔL (dB) | 7,2 | 7,2 | 17,2 | 26,7 | 36,4 | 40,7 | 38,5 | 34,3 |

ΔL : Sound attenuation not including end reflection