ITEM DETAILS

Dimensions in mm, * indicates distance to end of attached pipe

Notes regarding connection to range hood:

The actual diameters of range hood outlets may vary from the nominal 150mm or 125mm. Always check fit to ducting and choose the component with the closest fit to the outlet to use as the connector

Use sleeve and sealant if necessary to get sealed connection between ducting and range hood outlet (see installation kit)

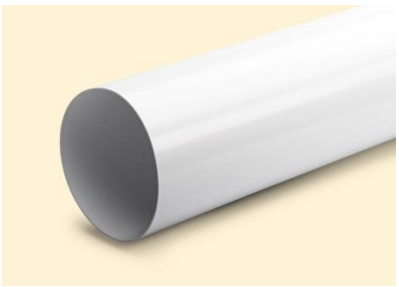
Includes

Hose clip for Flow 150 round pipe – 2 pcs
Short sleeve of 150mm flexible aluminium duct
Tube of neutral cure silicone
Wipes to clean ducting surfaces for silicone
White PVC ducting tape
(Note, methylated spirits can also be used for cleaning the ducting. Do not use mineral turpentine or other solvents, they will damage the ducting)

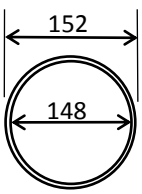
N40-INSTALL

Installation kit for ducting

Typical use: Connect Flow 150mm round pipe to 150mm rangehood outlet using 2 x hose clips plus short sleeve of flexible aluminium duct + Seal ducting connections using n/c silicone, plus tape if required



End view

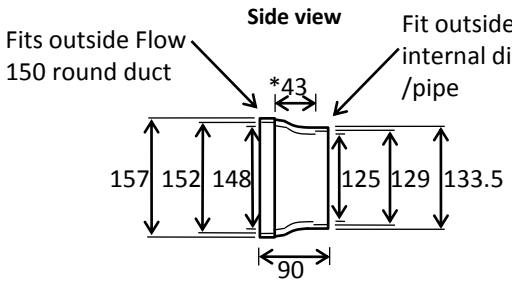


N405.2.102

Flow 150 pipe round 1000mm long, white

Typical use: Initial vertical ducting run straight up from 150mm rangehood outlet

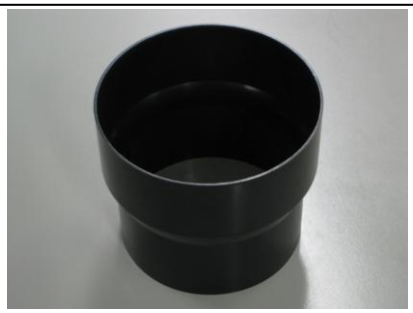
Side view



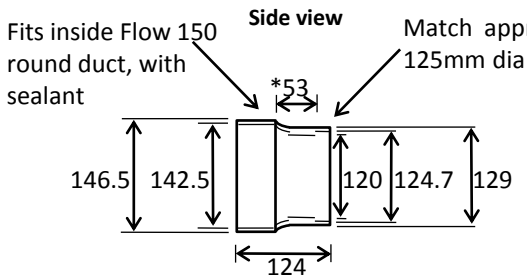
N401.1.048

Duct reducer Round 150 to 125mm

Typical use: Connect Compair 150 round pipe to 125mm dia range hood outlet – check fit to 125mm outlet (see note regarding connection, see also alternative N40-ADAPTOR)



Side view



N40-ADAPTOR

Alternative Duct reducer Round 150 to 125mm (non Compair)

Typical use: Connect Compair 150 round pipe to 125mm dia range hood outlet – check fit to 125mm outlet (see note regarding connection)

Continue to page 1 for full list of ducting components

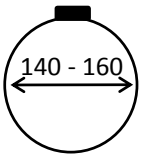
Kethy

COMPAIR RANGEHOOD DUCTING

Version 2. November 2012

Dimensions in mm,
* indicates distance to end of attached pipe

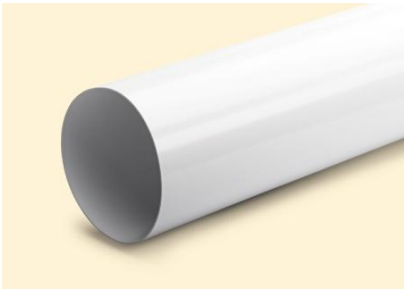
End view



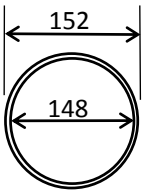
N402.1.133

Hose clip for 150 Round pipe

Typical use: 2 pcs to connect Flow 150 Round ducting pipe to rangehood outlet (use a short sleeve of flexible aluminium duct)



End view



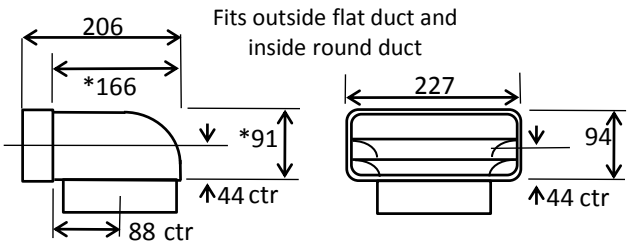
N405.2.102

Flow 150 pipe round 1000mm long, white

Typical use: Initial vertical ducting run straight up from rangehood outlet

---

Side view **End view**



N404.3.002

Flow 150 deflector 90° (bend, round to flat)

Typical use: Top of initial vertical run of round duct from range hood, turning 90deg to start flat duct. Also, to turn flat duct down to round outlet through eaves

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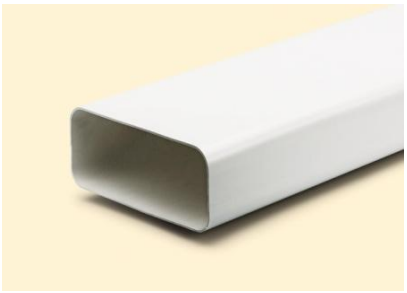
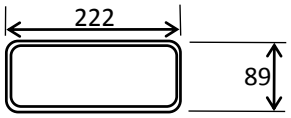


End view



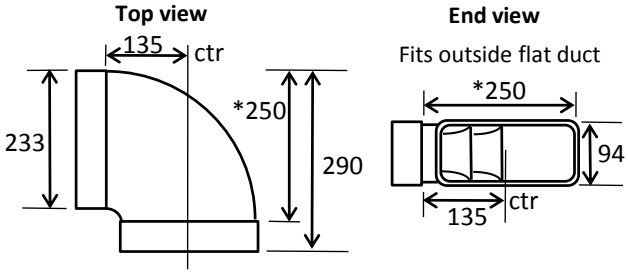
N404.3.001

Flow 150 flat duct pipe 1000mm no sleeve

Typical use: Main flat ducting run from above rangehood to outlet

---

Top view **End view**



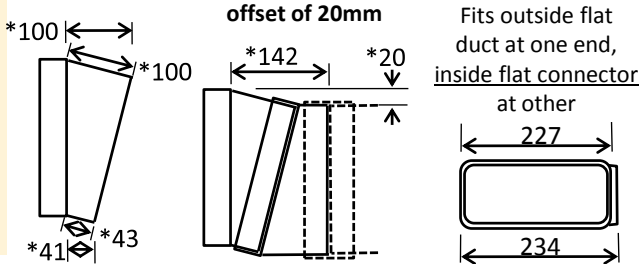
N404.3.003

Flow 150 flat pipe bend horizontal 90°

Typical use: Take main flat ducting run around horizontal corners

---

Top view **Top view – 2 pcs making offset of 20mm** **End view**



N404.3.007

Flow 150 flat pipe bend horizontal 15°

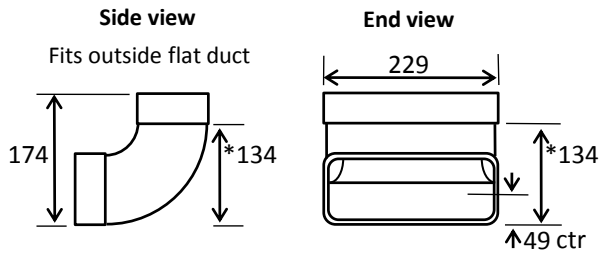
Typical use: Shallow corners, or in pairs to offset the flat ducting with minimal loss of flow (offset = 20mm + 25mm per extra 100mm duct between connections)

Kethy

COMPAIR RANGEHOOD DUCTING

Version 2. November 2012

Dimensions in mm,
* indicates distance to end of attached pipe



N404.3.004

Flow 150 flat pipe bend vertical 90°

Typical use: Take main flat ducting run up and over vertical steps

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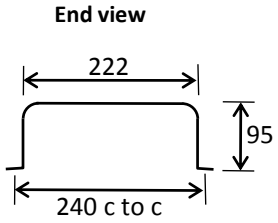

N404.3.019

Flow 150 flat duct mounting bracket

Typical use: Suggested 1 per length, to hold flat ducting in place and minimise the likelihood of vibration

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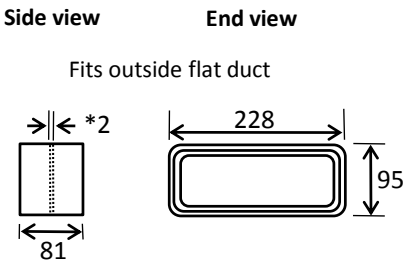

N404.3.005

Flow 150 flat pipe connector

Typical use: Connect lengths of flat duct, connect narrow end of 15° bend to flat duct

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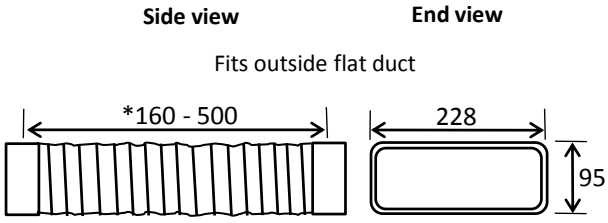

N404.3.042

Flexible joiner Flow 150 flat to flat

Typical use: Odd-angled corners or offsets, but 15 deg bends recommended for better flow, includes flat pipe connectors

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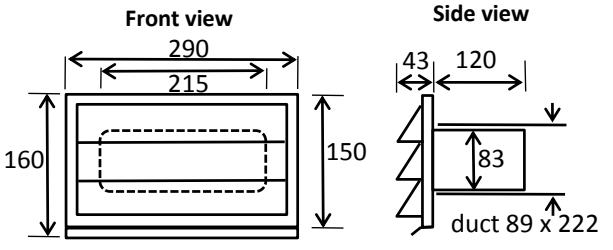

Fits inside flat duct through wall, cutout 92 x 225 +/- 2

N402.2.038

Vent louvred SS for Flow 150 flat

High quality Stainless Steel, simplest in brick wall - fits straight into flat duct through single brick space. Includes backflow shutter to exclude drafts, insects, without restricting flow

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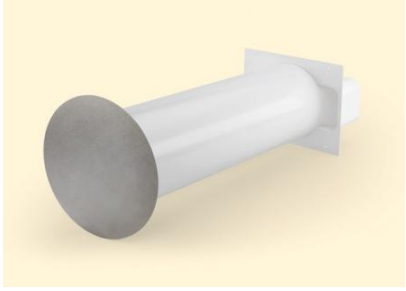
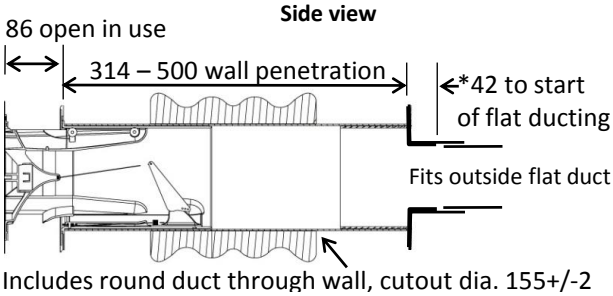




Includes round duct through wall, cutout dia. 155+/-2

N404.3.041

Flow Star GTS 150 F wall conduct for Flow 150 flat

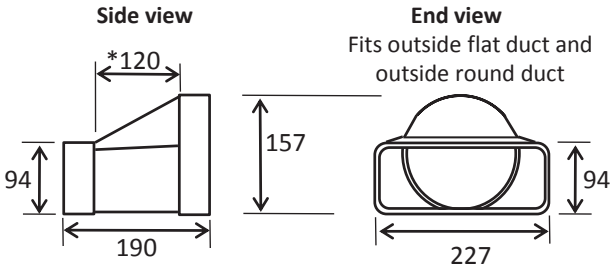
Sophisticated wall vent for maximum flow and weather protection, with wall plate. See final page

Kethy

COMPAIR RANGEHOOD DUCTING

Version 2. November 2012

Dimensions in mm,
* indicates distance to end of attached pipe



N404.3.006

Flow 150 flat-to-round connector/end piece

Typical use: Connect flat duct to length of round duct without wall plate

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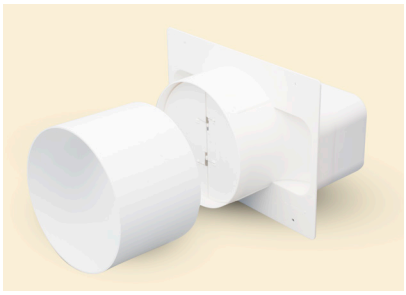
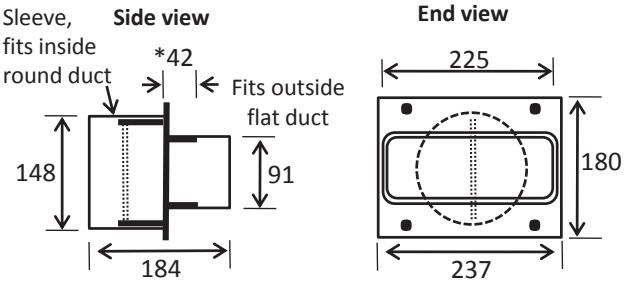


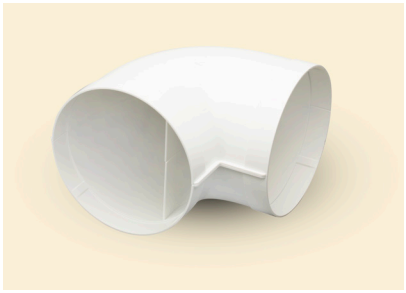


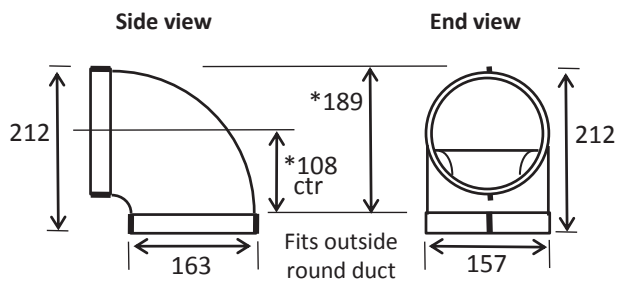
N404.3.058

Wall plate Flow 150 flat duct to Round 150 plus Sleeve

Typical use: Connect to flat duct when using round duct through wall to vent, sleeve telescopes inside round duct for adjustment, with removable backflow shutter

---



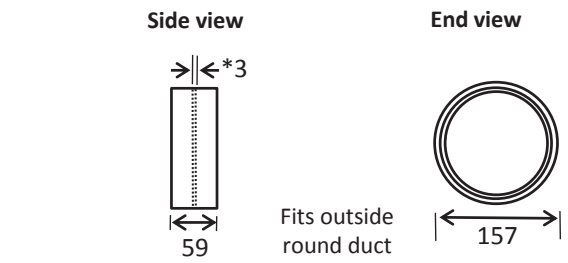


N405.2.015

Flow Round 150 pipe bend 90° White

Typical use: Take round ducting run (if used) around horizontal or vertical corners

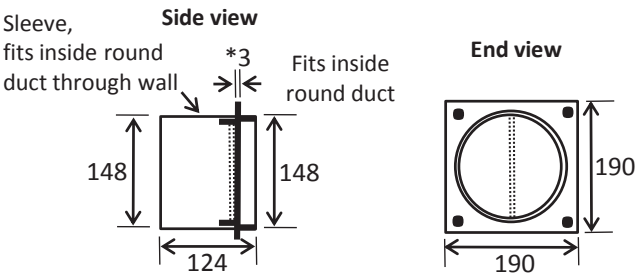
---



N405.2.017

Flow Round 150 pipe and hose connector White

Typical use: Connect lengths of round duct

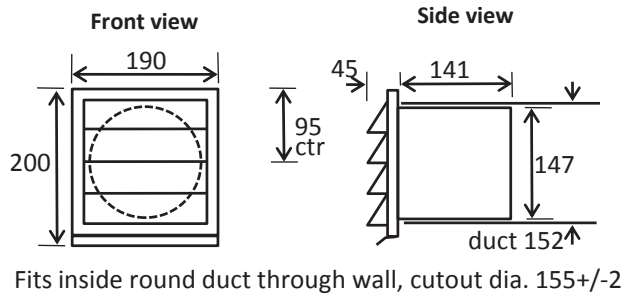


N404.3.057

Wall plate Round 150 duct to Round 150 plus Sleeve

Typical use: Connect to round duct when using round duct through wall to vent, sleeve telescopes inside wall duct for adjustment, with removable backflow shutter

---



Fits inside round duct through wall, cutout dia. 155+/-2

N402.2.012

Vent louvred SS for Round 150mm

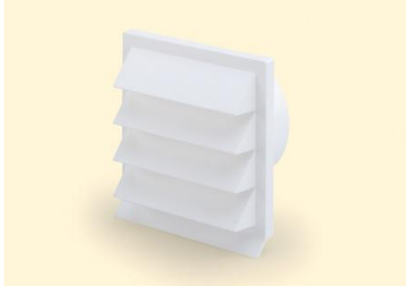
High quality Stainless Steel, fit straight into round duct. Includes backflow shutter to exclude drafts, insects, without restricting flow

Kethy

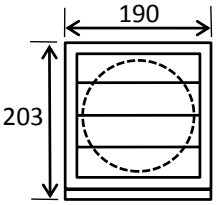
COMPAIR RANGEHOOD DUCTING

Version 2. November 2012

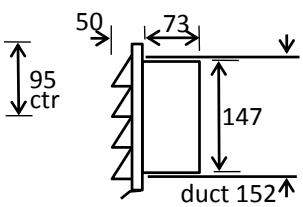
Dimensions in mm,
* indicates distance to end of attached pipe



Front view



Side view



Fits inside round duct through wall, cutout dia. 155+/-2

N404.4.044

Vent louvred 150 White round conn.

Budget vent, fit straight into Flow 150 round duct. Includes backflow shutter to exclude drafts, insects, without restricting flow

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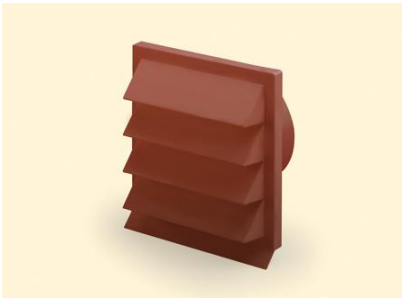
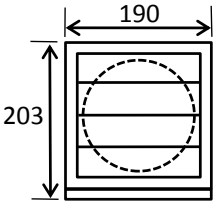
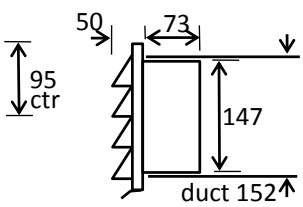


Front view



Side view



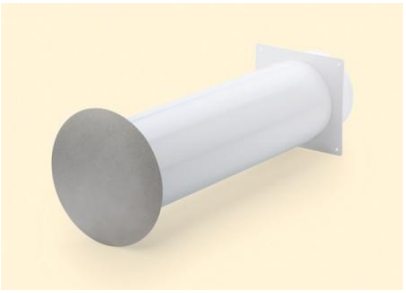
Fits inside round duct through wall, cutout dia. 155+/-2

N404.4.045

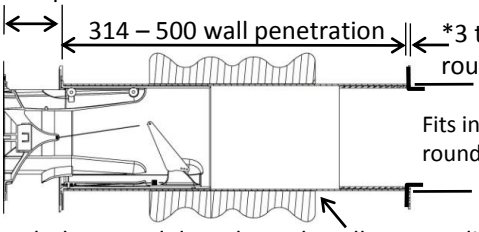
Vent louvred 150 Brown round conn.

Budget vent, fit straight into Flow 150 round duct. Includes backflow shutter to exclude drafts, insects, without restricting flow

---



Side view



Includes round duct through wall, cutout dia. 155+/-2

N404.3.040

Flow Star GTS 150 wall conduct Round

Sophisticated wall vent for maximum flow and weather protection, with wall plate. See final page

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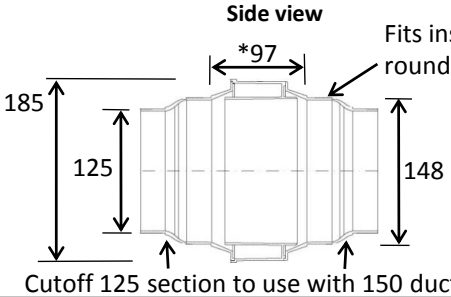
Side view



Cutoff 125 section to use with 150 duct

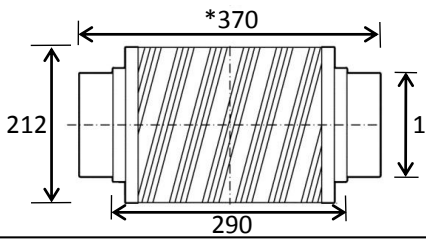
N404.3.018

Condensing water separator 125/150 Round conn

Stop dripping down vertical duct if big temperature change may cause condensation

---

Side view



Fit using 2 x 150 round connector N405.2.017 – order separately

N404.3.029

Silencer aluminium 150 Round conn.

Reduce fan noise travelling along duct - note, this will not reduce noise at the fan

---

Includes

Hose clip for Flow 150 round pipe – 2 pcs
Short sleeve of 150mm flexible aluminium duct
Tube of neutral cure silicone
Wipes to clean ducting surfaces for silicone
White PVC ducting tape
(Note, methylated spirits can also be used for cleaning the ducting. Do not use mineral turpentine or other solvents, they will damage the ducting)

N40-INSTALL

Installation kit for ducting

Typical use: Connect Flow 150mm round pipe to rangehood outlet using 2 x hose clips plus short sleeve of flexible aluminium duct + Seal ducting connections using n/c silicone, plus tape if required

Dimensions in mm,
* indicates distance to end of attached pipe

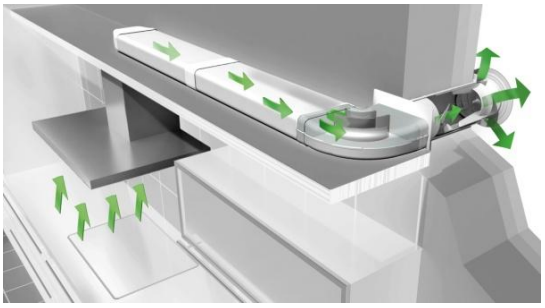
FLOW STAR GTS 150

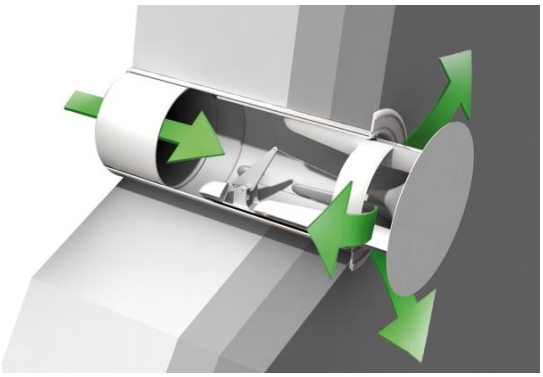
N404.3.041 Flow Star GTS 150 F wall conduct for Flow 150 flat ducting

N404.3.040 Flow Star GTS 150 wall conduct for Flow 150 round ducting

Sophisticated wall vents using guide vane technology for maximum flow, plus maximum weather protection

- Minimum back pressure and maximum flow when open
- Opens under light pressure from the rangehood when operating
- Held closed against seal by spring and magnets when idle

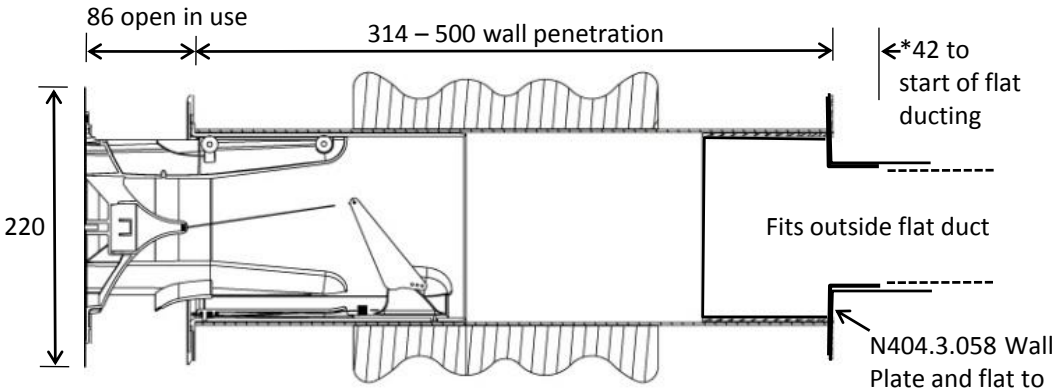




- Elegant, flat cover plate in brushed stainless steel, insulated on the inside
- Sturdy design with no-rust, solid lubricant ball bearings
- Optimum heat insulation
- No rattling in gusts of wind
- No electrical connection required

Note: minimum pressure of 150Pa = 0.02 psi to open – well within the capability of most rangehoods

Side view – shown here for connection to flat duct



Both models include round duct through wall, cutout dia. 155+/-2

The same Flow Star unit is used for connection to both flat ducting and round ducting, except that:

- The N404.3.041 Flow Star unit for FLAT ducting includes the N404.3.058 Wall Plate for flat to round connection (see detail)
- The N404.3.040 Flow Star unit for ROUND ducting includes the N404.3.057 Wall Plate for round to round connection (see detail)

Application of Regulations and Standards

Building Code of Australia 2010
(adopted as regulation in all states and territories)

Fire safety requirements ↓ | Ventilation requirements ↓

AS/NZS 1668.2 determines requirements (*1)

↓

Australian Standard AS/NZS 1668.2:2002 Ventilation design for indoor contamination control

Section 5: Mechanical ventilation – exhaust systems (*2)

Normal cooking emissions from appliances used solely for domestic purposes? **YES** →

NO ↓

Normal cooking emissions for commercial or institutional purposes, but at less than specified volumes (ie "minor") ? **YES** →

NO Volumes greater than maximum specified ↓ Equivalent to total maximum input to appliance of 8kW for electrical , 29MJ/hr for gas, or any deep fryer appliance

Domestic & minor commercial / institutional:

standards do not specify further requirements

→ ***Focus for the ducting is on performance in practice***

COMPAIR rangehood ducting from Kethy:

Innovative GUIDE VANE technology integrated into bends

↓

Super-smooth airflow through bends

↓

For a high-performance system, this means a BIG reduction in back pressure on the fan

↓ ↓

SUPER-QUIET: The rangehood can run as quietly as possible (Back-pressure = noisy fan)

SUPER-EFFICIENT: The rangehood can ventilate as much as possible (Back pressure = much less airflow)

LOW FLAMMABILITY The ducting is constructed from plastics which need to be exposed to a much higher temperature than wood before catching fire (*6) and they are also generally regarded as self-extinguishing. They are used widely in Europe for this purpose

INSTALLATION - SIMPLE and COMPACT The low profile, flat section of the ducting and the small inner radius of the bends mean that it can be installed unobtrusively with minimal effort – without loosing valuable space and **without loosing quietness and efficiency**

↓

COMPAIR rangehood ducting from Kethy provides an excellent solution:

- for the trade - for consumer satisfaction

Commercial /Institutional: standards exclude COMPAIR ducting + most other domestic products

AS/NZS 1668.2 Sections 5.4-5.6 apply – minimum exhaust volumes for hoods (m3/hr per metre of hood length) approx. 1600 over electric cooking, 2400 over gas (*3) → **Excludes most domestic range hoods**

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AS/NZS 1668.1 Section 11 applies – requires fire dampers on ducts and openings plus fans, hoods and ducting with minimum fusion (ie melting) temperature of 1000degC (*4) → **Excludes aluminium & most other non-steel ducting and components**

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AS 4254:2002 Section 2 applies – requires ducting to meet fire hazard Standards, specifies rigid steel or equivalent (*5) → **Applies fire hazard Standards (not applied to domestic)**

Other notes:

Cooking appliances: by way of comparison with the AS 1668.2 Standard, power ratings are frequently up to around 6-7kW for 4-5 zone domestic electric cooktops and 40-50MJ/hr for 5-burner gas with a wok burner contributing around 15-18 MJ/hr (*7). It is unlikely that these appliances will be operated at full power for long periods, but this is pushing the top end for "minor" exhaust systems, so a powerful rangehood and efficient ducting are highly recommended.

AS/NZS 4386:1996 Domestic kitchen assemblies provides some general information but does not specify any requirements within the standard (*8)

Prepared by Kethy Australia based on reference to the Building Code of Australia and relevant Australian Standards documents. *See following page for details of sources. This information does not constitute advice for specific situations and Kethy does not take any responsibility for its use.

***1 Building Code of Australia 2010:** Requirements apply to ducting as follows:
Volume 1 – Class 2 to Class 9 Buildings: (commercial/institutional)
Section C: Fire Resistance, Specification C1.10.8 Air-handling ductwork: applies AS4254 (via AS1668.2, see AS 4254).
Section F4: Light and Ventilation .12 Kitchen local exhaust ventilation: applies AS/NZS 1668.
Volume 2 – Class 1 and Class 10 Buildings: (domestic)
Section3: Acceptable Construction, Part 3.7 Fire Safety .1 Fire separation: applies AS/NZS 1668.2. Part 3.8 Health and Amenity .5 Ventilation: applies AS/NZS 1668.2.

Australian Standard AS/NZS 1668 The use of ventilation and airconditioning in buildings:

AS/NZS 1668.2:2002 Ventilation design for indoor contamination control
***2** Section 5 Mechanical ventilation – exhaust systems, Figure 5.1 General guide for application + Clause 5.3.1 Types of effluent requiring local exhaust
***3** Based on Table 5.1, calculated for overhead rangehood 500mm front to back, positioned 650mm above cooking surface, assuming cooking intensity up to medium-to-high heat with high grease content

***4 AS/NZS 1668.1-1998 Fire and smoke control in multi-compartment buildings**
Section 11 Kitchen hood exhaust systems, 11.1 Scope and application:
applies "as required by AS 1668.2 and likely to generate grease vapour." Also, "This Section is intended to cover kitchen hood exhaust systems associated with commercial type installations. It is not intended to apply to domestic type installation associated with home units, flats or facilities provided in office type accommodations for use by staff members. These latter systems would usually be treated as minor exhaust systems." (C11.1)
Notes: If 1668.1 does apply, then it specifies ductwork construction "shall be galvanised steel of a thickness not less than 1.2mm, stainless steel not less than 0.9mm thickness or other suitable material" (Clause 11.2.3.1). It also requires fire dampers on ducts and openings (Section 3), plus the use of ducting materials that have a temperature of fusion not less than 1000degC (Section 2), which also applies to exhaust fans, casings and cowls (Clause 11.2.5). This excludes aluminium, which has a temperature of fusion of approx. 660 degC. Also, Clause 11.2.3.1 requires Clause 2.2.1, which in turn requires AS 4254 provisions for fire hazard properties.

***5 Australian Standard AS 4254:2002 Ductwork for air-handling systems in buildings**
Part 1.3.1 Application, General: This standard applies to ductwork for air-handling systems in accordance with the requirements of AS/NZS1668.1 and AS 1668.2
Part 2.1.2 Rigid ductwork: assembled system shall a). have AS 1530.3 test results for smoke development index not greater than 3 and spread of flame index not greater than 0 and b). Pass the UL181 burning test
Part 2.1.3 Kitchen exhaust ductwork: "shall be constructed from galvanised sheet steel, stainless steel, or other approved rigid, hard-faced, fire retardant material, impervious to grease, smooth and free from obstructions on the internal surfaces". Also includes specifications for take-offs, clean-outs and rise/fall

***6** The tube sections of the ducting are made of a PVC material and non-metal fittings are made of an HIPS plastic which have self-ignition temperatures of approx. 450degC and 490degC respectively (Source: Product data sheets from the plastics manufacturers). This is much higher than for wood, which self-ignites at around 250degC (general information available on internet).

***7** Based on internet search of products listed in Australia, April 2012

***8 Australian Standard AS/NZS 4386:1996 Domestic kitchen assemblies**
Part 1: Kitchen units & Part 2: Installation
1.0 Scope (Part 1 & Part 2): Applies to fitted kitchen assemblies (both flat-pack and pre-assembled) for domestic use, also to small offices , holiday apartments, units and similar non-commercial applications, primarily intended for BCA Classes 1, 2, 3 and 4 buildings but may also include Classes 5 and 6:
Part 1 Figure C6(b) & Part 2 Figure A6(b) "All canopy rangehoods and downdraft systems require connection to power and must be ducted to the outside of the building" plus Part 1 Figure C6(c) & Part 2 Figure A6(c) Includes both externally ducted rangehoods and ones that recirculate filtered air back out of the unit.
Note: these statements are for general information (description of available products) and do not form part of the Standard (see Part 1 pg 26, Part 2 pg 13). This Standard is not referenced by the BCA , AS/NZS 1668 or AS 4254.