

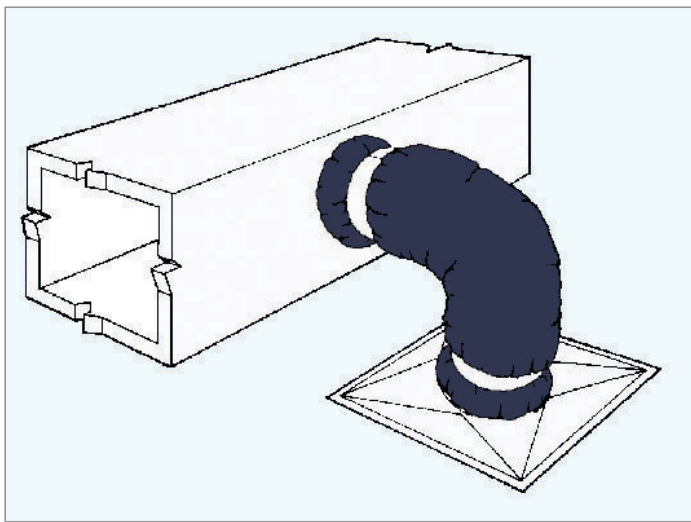
DUCTING INSTALLATION & USAGE

The layout of flexible duct, the number of bends, the sharpness of the bend and the amount of sag allowed between support joints will have serious effects on system performance due to the increased resistance to airflow each introduces.

Use the minimum length of flexible duct to make connections. It is not recommended that excess length of ducts be installed to allow for possible future relocations of air terminal devices.

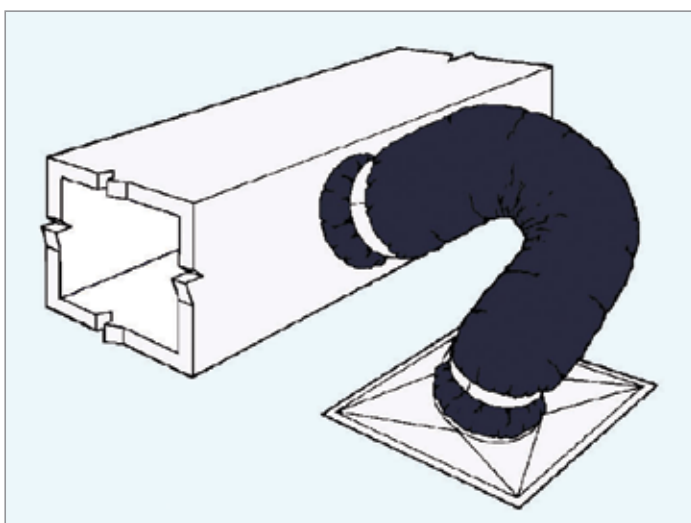
Avoid installation where exposure to direct sunlight can occur e.g: skylight. Grilles and diffusers need to be supported independently of the flexible duct.

Repair torn or damaged vapour barrier/jacket with duct tape listed and labelled to Standard AS4254. If internal core is penetrated, replace flexible duct or treat as a join.



Right Setup

Install duct fully extended, do not install in the compressed state or use excess lengths. This will noticeably increase friction losses.



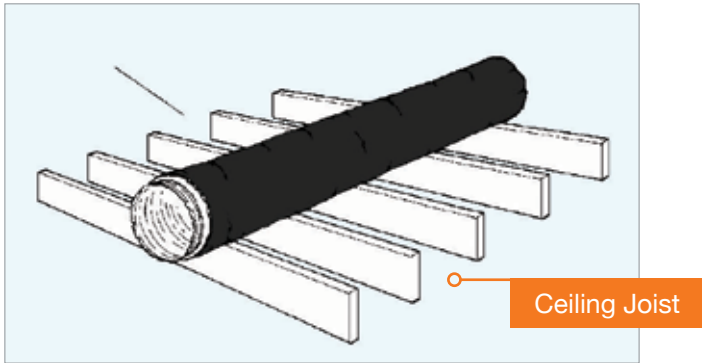
Wrong Setup

Avoid bending ducts across sharp corners or incidental contact with metal fixtures, pipes or conduits.

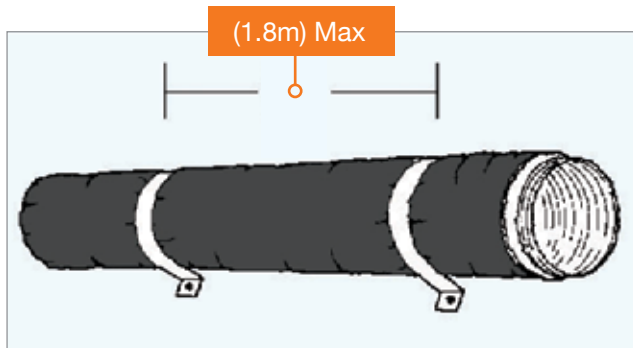
Flexible ducts shall be installed with a bend radius to duct diameter ratio in accordance with the following info on the next page.

SUPPORTING

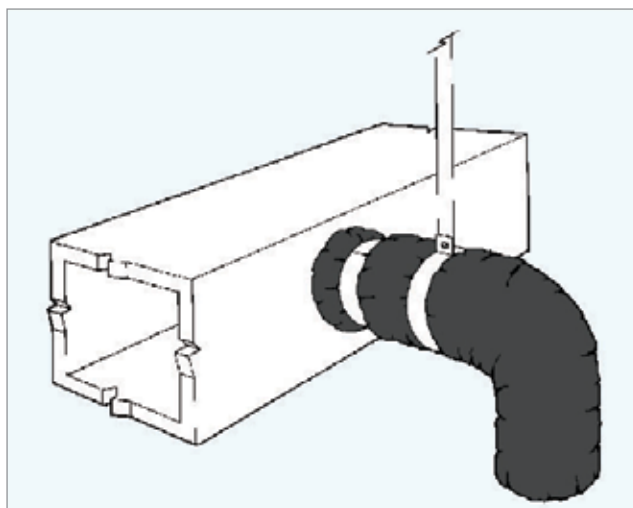
FLEXIBLE DUCT



Flexible ducts may rest on ceiling joists or truss supports. Maximum spacing between supports shall not exceed 1.5m.



Vertically installed duct shall be stabilised by support straps at a max of 1.8m.



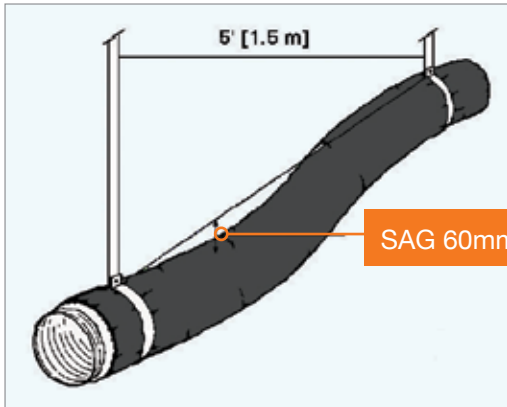
Support the duct between a metal connection and bend by allowing the duct to extend straight for 100mm before making the bend.

This will avoid possible damage of the flexible duct by the edge of the metal collar.

NOTE: Upon completion of installation, please test in accordance with 2.8.2 of standard AS4254.

NOTE: factory-made air ducts may not be used for vertical risers in air duct systems serving more than two stories.

SUPPORTING FLEXIBLE DUCT



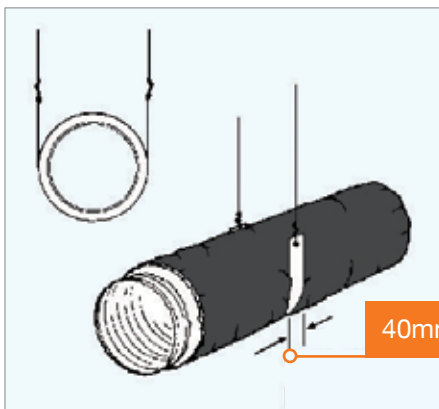
01

Flexible duct shall be supported at intervals, no greater distance than 1.5m. Maximum permissible sag is 60mm per metre of spacing between supports.

A connection to rigid duct or equipment shall be considered a support joint.

Long horizontal duct runs with sharp bends shall have additional supports before and after the bend approximately one duct diameter from the centreline of the bend.

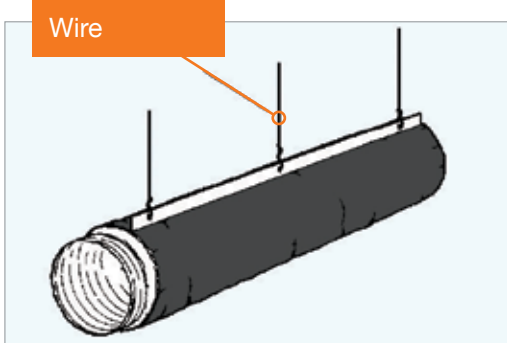
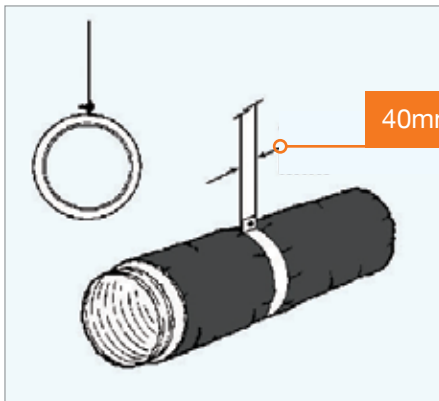
Recommend Hanging Straps DCT0808.



02

Hanger or saddle material in contact with the flexible duct shall be of sufficient width to prevent any restriction of the internal diameter of the duct when the weight of the supported section rests on the hanger or saddle material.

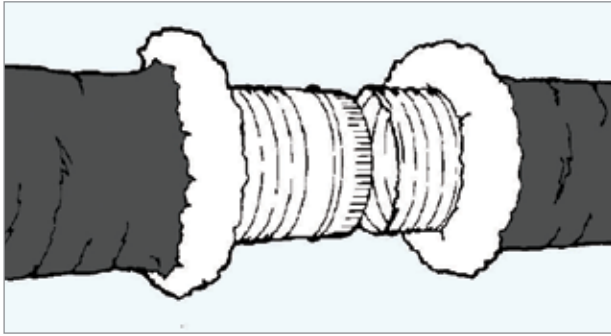
In no case will the material contacting the flexible duct be less than 40mm wide.



03

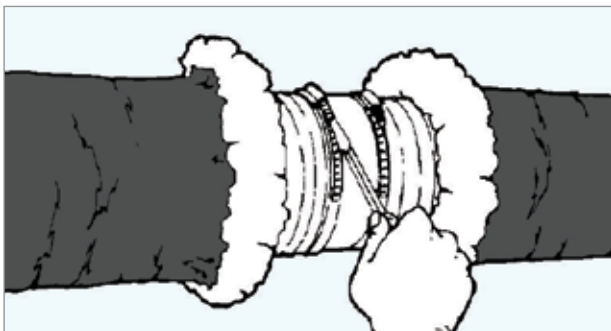
Factory installed suspension systems integral to the flexible duct is an acceptable hanging method.

JOINS



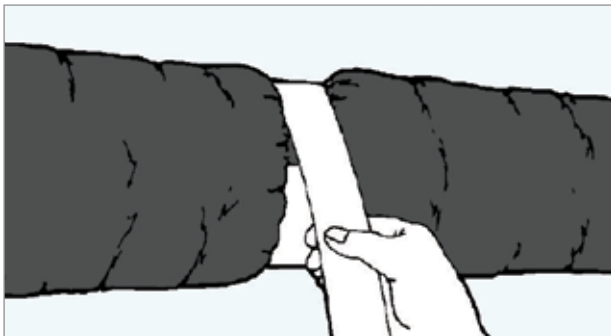
01

Fold back duct jacket and insulation from core. Butt two cores together on a 4" (100mm) length metal sleeve or polymer sleeve.



02

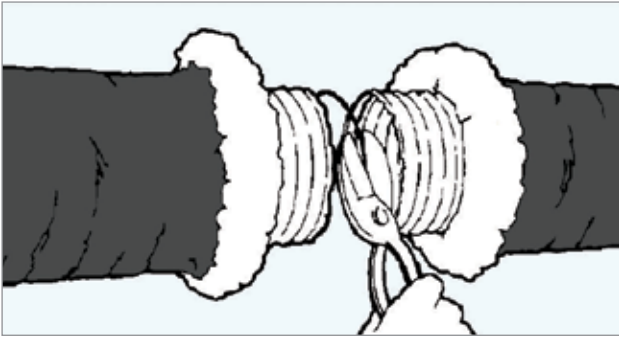
Tape cores together with at least 2 wraps of duct tape. Connection can be secured with 2 cable ties placed over the taped core ends.



03

Pull jacket and insulation back over cores. Tape jackets together with at least 2 wraps of duct tape.

AIR DUCTS



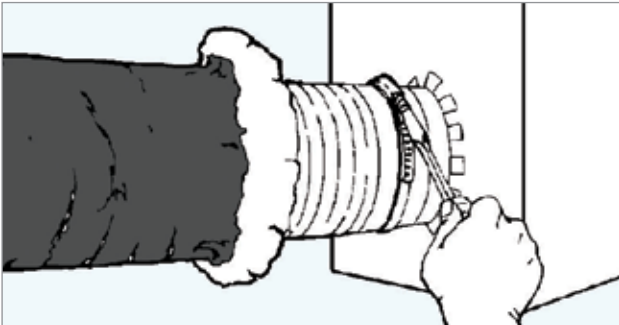
01

Non-metallic with Plain Ends.

After desired length is determined, cut completely around and through duct with knife or scissors.

Cut wire with wire cutters.

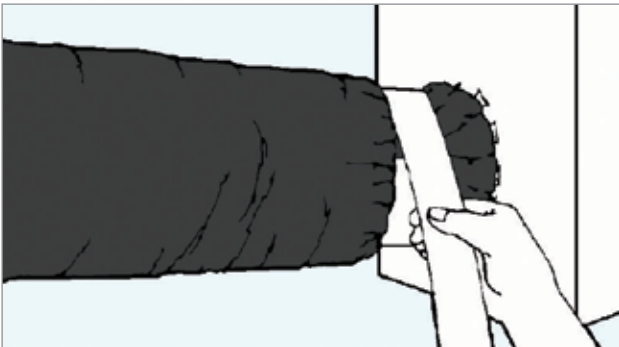
Fold back duct jacket and insulation.



02

Slide at least 1" (25mm) of core over the fitting up to the bead. Seal the core to collar with at least two wraps of duct tape.

Secure connection with cable ties placed over the core and duct tape.

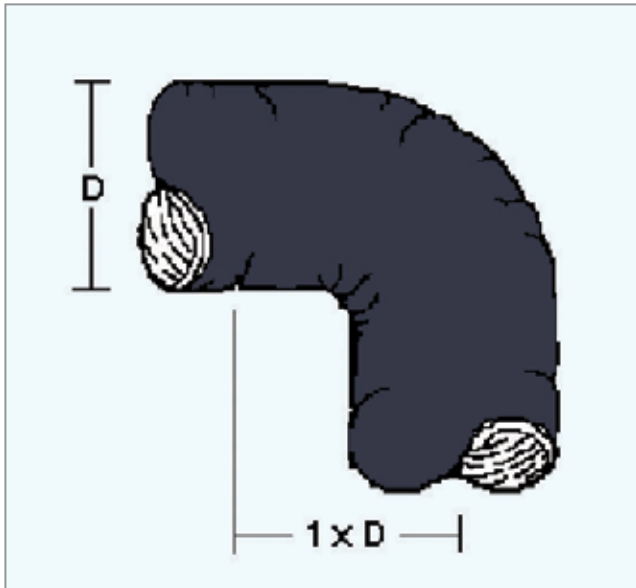


03

Pull jacket and insulation back over core. Tape jacket with at least 2 wraps of duct tape ensuring end of the outer jacket is secured to the spigot.

Cable ties may be used in place of or in combination with the duct tape.

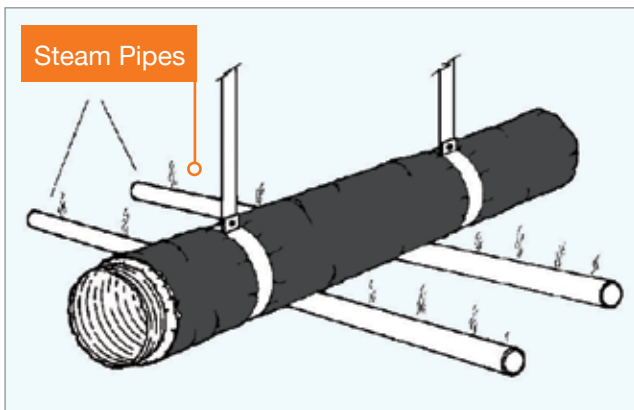
DUCTING INSTALLATION & USAGE



e.g. Assuming duct velocity of 8m/s

Duct velocity R/D ratio centerline
radius to duct diameter:

Up to 5m/s x 0.6
5m/s x 1.0
Above 8m/s x 1.5



Wrong Setup

Do not install near hot equipment (e.g. heaters
boilers, steam pipes etc.) that is above the
recommended flexible duct use temperature.