

Duct EZY 8/11 Kit

for Ducted Split Systems

Installation Instructions

GENERAL

Duct EZY is a ready designed, premium ducted air conditioning package.

This installation instruction is to be read in conjunction with the separate installation instructions supplied with the Hitachi indoor and outdoor units.

This kit must be installed in accordance with all national and local safety codes.

Duct EZY 8 Kit Components

(SKH-DEZ-082 or SKH-DEZ-L82)

1. Hitachi RAD-E70 Ducted indoor unit.
2. Hitachi RAC-E70 Inverter outdoor unit.
3. Hitachi Wall controller (SPX-WKT3).
4. Supply Air Diffuser (RPD-200: 200 dia.) (x3).
5. Flexible duct for supply air (200 dia x 3m) (x3).
6. Supply air plenum, 200 dia. outlets (x3).
7. Return air plenum, single inlet, 350 dia.
8. Flexible duct for return air (350 dia. x 3m) (x1).
9. Return air grille with hinged filter & boot (400 x 400mm or 850 x 400mm).
10. Duct tape roll 30m.

Check that all parts listed are supplied.

Duct EZY 11 Kit Components

1. Hitachi RPI Ducted indoor unit.
2. Hitachi RAS Inverter outdoor unit.
3. Hitachi Wall controller (PC-ARF).
4. Hanger bracket set for indoor unit (4 brackets).
5. Supply Air Diffuser (RPD-250: 250 dia.) (x4).
6. Flexible duct for supply air (250 dia x 3m) (x4).
7. Supply air plenum, 250 dia. outlets (x4).
8. Return air plenum, 2 inlets, 350 dia. ea.
9. Flexible duct for return air (350 dia. x 3m) (x2).
10. *Single Return Version (SKH-DEZ-111):*
Return air grille with hinged filter & boot (850 x 400mm).
Dual Return Version (SKH-DEZ-D11):
Return air grille with hinged filter & boots (600 x 600mm) (x2).
11. Duct tape roll 30m.

Check that all parts listed are supplied.

Required but not included:

1. Timber for box framing and mounting Return Air grille/s.
2. Screws to secure plenums to indoor unit.
3. Timber framing between joists to enable **optional** suspension of indoor unit.
4. Hanger rods/nuts/washers for **optional** suspending of indoor unit.
5. A platform and anti-vibration mounts or pads if planning to site the indoor unit on top of/across ceiling joists.

Optional

Duct EZY 11 Expansion Kit – enables a greater distance between the Hitachi indoor unit and supply air diffuser. Includes:

1. Flexible duct for supply air (250 dia x 3m)
2. Duct joiner (250 dia.).
3. Manually adjustable regulating damper (250 dia.).

Duct EZY 8 suitable expansion components are available separately from Temperzone.

INSTALLATION

Plan

Before starting, decide approximate position for supply and return air grilles. Refer pages 2 and 3 for typical home and office layouts.

Note: The maximum span between the return grille and any supply grille is around 6 m - as all ducts are 3 m long. Positioning should take account of any obstacles in the ceiling space. The return air grille/s should be placed where the filter can be easily accessed, eg in a hall-way.

For existing buildings with fixed ceilings, there must be a way of getting the indoor unit into the ceiling space.

Note: The Duct EZY 11 indoor unit will fit through the supplied return air grille.

This kit is designed to suit a typical home/office layout. Any alterations/extensions to the supplied equipment may result in reduced system performance. If in doubt, refer to Temperzone.

Return Air Grille

1. *Duct EZY 8 (SKH-DEZ-082):*
Cut a 405 x 405 mm hole in ceiling to fit 400 x 400 return air grille,
Duct EZY 8 (SKH-DEZ-L82):
Cut a 870 x 420 mm hole in ceiling to fit 850 x 400 return air grille.
Duct EZY 11 Single:
Cut a 870 x 420 mm hole in ceiling to fit 850 x 400 return air grille.
Duct EZY 11 Dual:
Cut two 405 x 405 mm holes in ceiling to fit 400 x 400 return air grilles.
2. *Duct EZY 8 or Duct EZY 11 Dual:*
Frame out the hole as necessary for the return grille/s to no smaller than 405 x 405 mm (or 855 x 405 mm if applicable) to provide a fixing surface for the grille.
Duct EZY 11 Single:
 - a. Pass the indoor unit through this hole by orientating correctly. If necessary the supply and return flanges can be unscrewed from the indoor unit to increase clearance. In extreme cases the fan and coil sections of the indoor unit can be separated to further aid access.
 - b. Frame out the hole as necessary for the return grille to no smaller than

855 x 405 mm to provide a fixing surface for the grille.

3. Insert the frame of the return grille into its hole. Affix the frame by drilling through the side of the grille frame, close to the top, into the supporting wooden framework. Screw in at least four places to ensure it is fully secure.
4. Discard the blanking insulation panel for dual duct applications.
5. Position indoor unit within the ceiling cavity approximately in the middle between the supply and return grilles.

Indoor Unit Mounting

Firstly, read the instructions that are supplied with the indoor unit.

The indoor unit can be mounted either hung from the ceiling structure or sat on a level platform over ceiling joists.

If mounting the indoor unit by hanging:

Add the hanger brackets (supplied) to the indoor unit as per instruction sheet. Securely hang via hanger rods (Note: hanger rods/nuts/washers need to be provided by the installer. Also note, some extra framing within the roof trusses may be required to hold the top of the hanger rods).

If sitting the indoor unit on ceiling joists:

Securely position across multiple joists, ensuring that satisfactory rubber mounts are placed between the unit and the joists to remove any possibility of noise passing to the occupied space below.

6. Attach the supply and return plenums to the indoor unit with screws (provided by installer). Seal the outside of the joint between the plenum and unit with duct tape (supplied).
7. Attach the supply duct to the supply plenum. Push the duct fully on to the plenums supply spigots and tape on with duct tape.

Supply Air Diffusers

8. Mark the position of the supply diffuser and cut out the appropriate holes using the templates provided with the supply air diffusers.
9. Stretch out flexible supply duct and put through cut holes. Ensure duct is fully stretched out and bends are as gentle as possible. Tape duct to supply diffuser inlets.
Note: Tight bends or compressed duct will restrict air flow and reduce performance.
10. Push supply diffusers in to cut holes ensure the latches snap in to place.

Return Air Grille

11. Fix return air plenum to indoor unit with screws (provided by installer). Seal the joint between the plenum and unit with duct tape.

12. Attach the 350 dia. return air flexible duct to the return plenum. Push the duct fully on to the plenums spigots and tape on with duct tape.
13. Stretch out flexible supply duct. Tape duct to return grille spigots. Ensure duct is fully stretched out and bends are as gentle as possible.
Note: Tight bends or compressed duct will restrict air flow and reduce performance.
14. Attach face of grille, partially close, insert filters then fully close and latch by turning fasteners provided.

Indoor Unit

- (To be read in conjunction with the instructions that are supplied with the indoor unit.)
15. Using normal installation practices, run a drain pipe (25 mm) from the indoor unit to a suitable drain point, ensuring the drain pipe has a constant fall on it.
 16. Using normal install practices, attach an interconnecting wire to the terminal block of the indoor unit as per the wiring instructions supplied with the indoor unit. Run this wire to the position of the outdoor unit.
 17. Using normal install practices, attach a remote control wire (screened) to the terminal block of the indoor unit as per the wiring instructions supplied with the indoor unit. Run this wire to the position of the wall controller.

18. Using normal install practices, run the pipe work between the indoor and outdoor units. Flare and connect as normal.

Outdoor Unit

- (To be read in conjunction with the instructions that are supplied with the outdoor unit.)
19. Install outdoor unit on suitable feet / pad, and connect all wiring & piping as necessary following good refrigeration installation practices.
 20. Complete refrigeration requirements by pressure testing, vacuuming, and charging refrigerant piping as required. Double check for any leaks.
 21. Power up system but do not start. Leave to sit for up to 4 hours to allow compressor crankcase to come up to temperature.
 22. Start unit and ensure it is running correctly in both heating and cooling modes. Balance airflow as required by opening / closing supply air grilles.
 23. Explain operation of wall controller to end user and leave the operation manual for them.

MAINTENANCE

Six Monthly

Replace or vacuum clean return air filter.

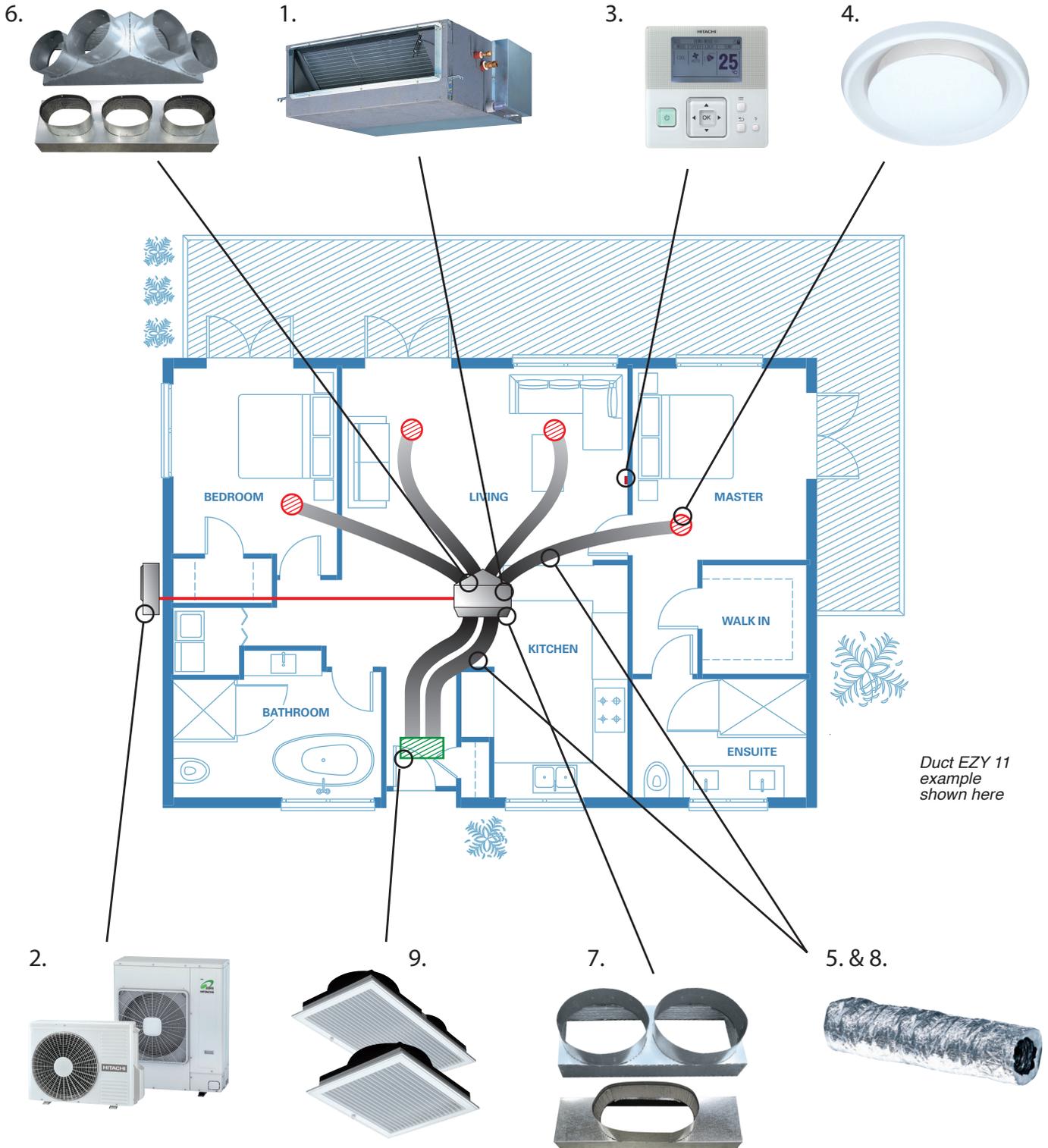
Refer to Hitachi units' instructions for additional maintenance requirements.

Supply air diffusers: Wipe with a damp cloth or vacuum any dust accumulation.

NOTE

The manufacturer reserves the right to change specifications at any time without notice or obligation.

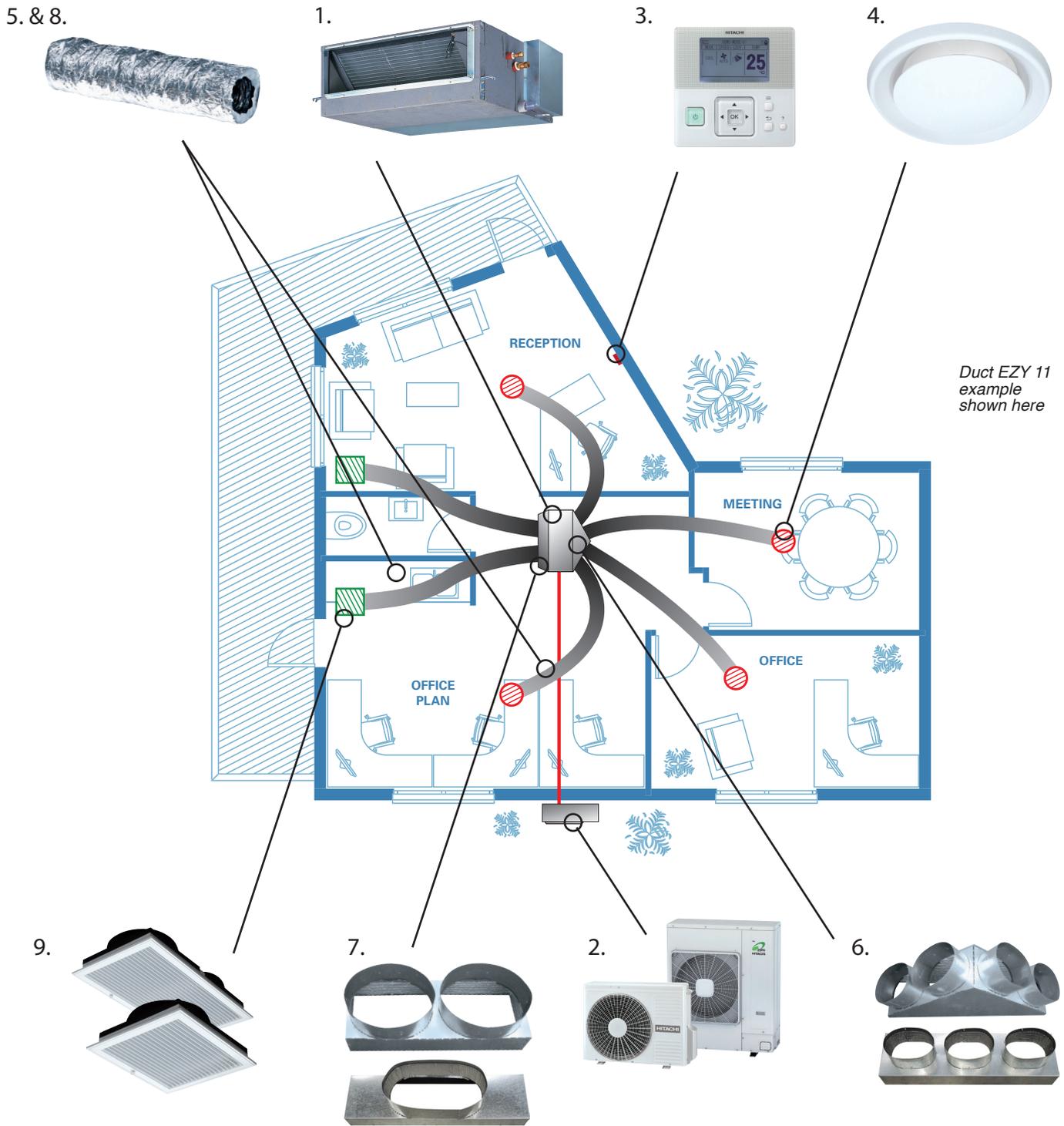
Typical Home Layout



KEY

1. Hitachi Ducted indoor unit.
2. Hitachi Inverter outdoor unit.
3. Hitachi Wall controller.
4. Supply Air Diffuser.
5. Flexible duct for supply air (3m).
6. Supply air plenum.
7. Return air plenum.
8. Flexible duct for return air (3m)
9. Return air grille (single or dual) with hinged filter & boots.

Typical Office Layout



KEY

1. Hitachi Ducted indoor unit.
2. Hitachi Inverter outdoor unit.
3. Hitachi Wall controller.
4. Supply Air Diffuser.
5. Flexible duct for supply air (3m).
6. Supply air plenum.
7. Return air plenum.
8. Flexible duct for return air (3m)
9. Return air grille (single or dual) with hinged filter & boots.