



M SERIES
MODULAR AIR CONDITIONING AND
HEAT PUMP FAN/COIL UNITS
for space-saving installations

The innovative Unico System allows central air conditioning and heating installation in applications where the highest comfort is the goal. The Unico System uses a conventional outdoor condensing unit or heat pump in conjunction with a specially designed indoor evaporator fan/coil unit, which distributes air through a high static pressure system of small ducts and plenums. Supply ducts to individual rooms are only 2-inch (50 mm) inside diameter, and can be run over or around structural obstacles or through existing walls and closets where conventional duct will not fit. Plenum duct inside dimensions are 7, 9, or 10-inch. Older buildings, custom homes, commercial offices, and other applications can be air conditioned and heated with a Unico System without major renovations or sacrifice of space.



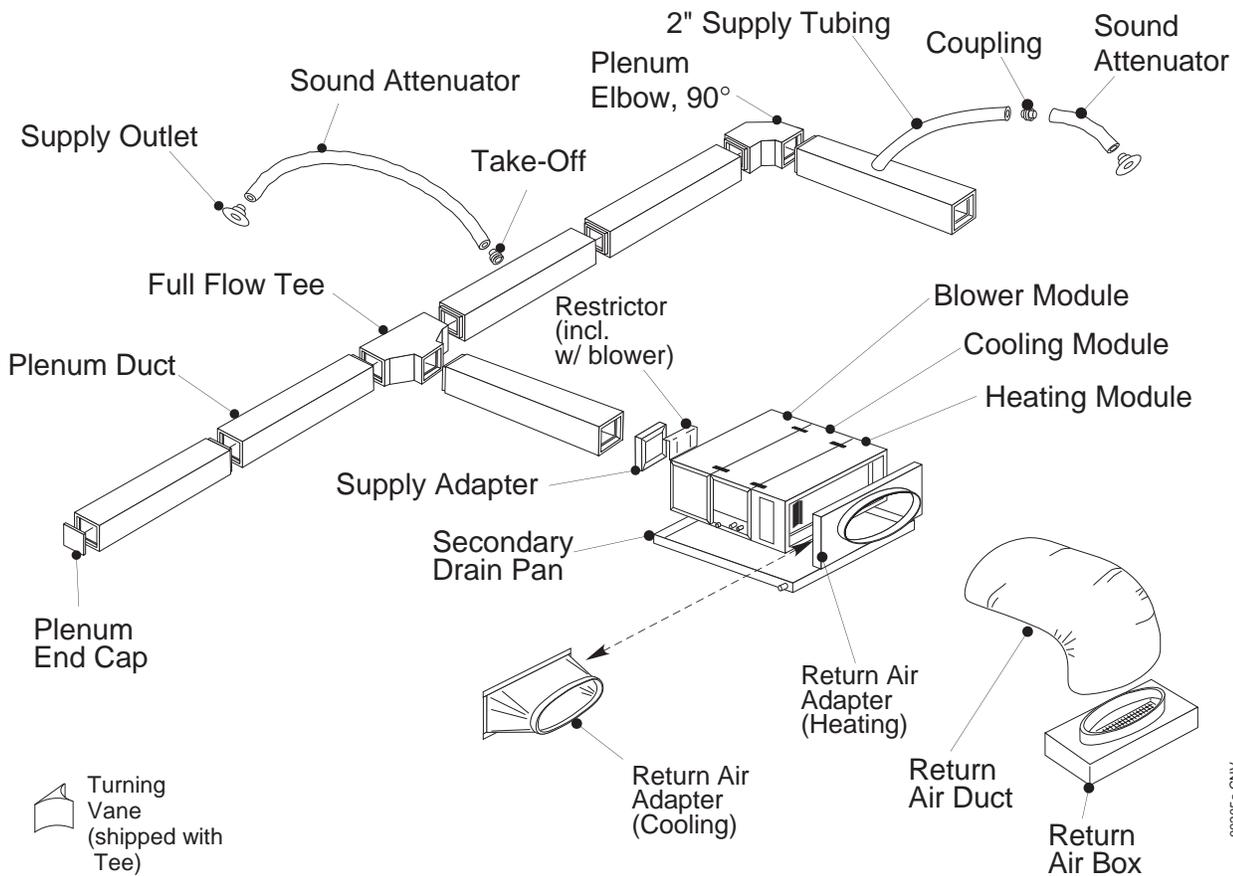
The modular series Unico fan/coil unit is for cooling and/or heating applications, and is available in three sizes which cover cooling capacities from 2 through 5 nominal tons and heating capacities from 20,000 to 120,000 Btuh using the hot water coil. The unit is modular in construction to accommodate the widest range of options and configurations. The modules easily clamp together and are light enough for one person to install. They can be arranged in a horizontal, upflow, or downflow configuration. There are three basic modules: a cooling module (either an evaporator, heat pump coil, or chilled water coil), the heating module (with hot water coil), and the blower module (with control box). The unit may be matched with most conventional condensing units or heat pumps of proper capacity. An optional multi-staged electric duct heater, up to 20 kW, mounts to the discharge of the blower to provide the most compact installation.



Cabinet construction is galvanized steel and fully insulated. The Unico System cooling module (MC) uses a deep copper tube/aluminum fin coil that produces superior moisture removal compared to a more conventional system. It comes standard with a corrosion resistant primary drain pan to provide lifetime protection; the condensate drain is $\frac{3}{4}$ -inch FPT. The refrigerant coil module is equipped with a factory installed thermostatic expansion valve and freeze protection controls for proper operation and to prevent icing. Water coils are equipped with a drain and a vent valve.

All Unico System blower modules (MB) include a 208/230 volt, single phase direct-drive blower isolated from the conditioned air stream. The control box, which houses the variable speed motor control, blower relay(s), control transformer, and high and low voltage terminal blocks, is shipped with the blower module and can be installed either on the top or side of the unit. The blower module can also be purchased or upgraded with the ACB control for additional functions. Duct, plenums, secondary drain pans, connectors, and fittings are ordered separately according to individual job requirements. Specify round or square plenum connection when ordering.

NOTE: The Unico System operates at a higher static pressure than conventional duct systems and has unique design and layout requirements for proper air distribution. It is important that the manufacturer's installation instructions be followed exactly to achieve maximum effectiveness.



BLOWER MODULE - 208/230 VOLT, 60 HZ, 1 PH (Includes control box)

MFR. NO.	MOTOR		CFM @ 1.5" E.S.P.	DIMENSIONS H x W x D	SHIP WT.
	HP	RPM			
MB2430L	1/2	1700	600	17.5 x 25 x 13.75	62
MB3642L	1	1700	1000	17.5 x 38 x 13.75	72
MB4860L	1	1700	1250	17.5 x 38 x 13.75	85

HEATING MODULE (Without heating coil)

MFR. NO.	DIMENSIONS H x W x D	SHIP WT.	MATCHING HOT WATER COIL		ELECTRIC HEAT OPTIONS, KW
			MFR. NO.	MAX. CAPACITY, BTUH	
MH2430	17.5 x 25 x 12	20	HW2430	73,800	5, 7.5, 10, 15
MH3660*	17.5 x 38 x 12	27	HW3642	120,000	5, 7.5, 10, 15, 20

*The MH3660 matches both the 3642 and 4860 blower and cooling modules

REFRIGERANT COOLING MODULE

COOLING ONLY MFR. NO.	HEAT PUMP MFR. NO.	NOMINAL TONS	CONNECTIONS		DIMENSIONS H x W x D	SHIP WT.
			INLET	OUTLET		
MC2430(C, CX)*	MC2430H	2 THRU 2 1/2	3/8" OD	7/8" OD	17.5 x 25 x 13.75	62
MC3642(C, CX)*	MC3642H	3 THRU 3 1/2	3/8" OD	7/8" OD	17.5 x 38 x 13.75	78
MC4860(C, CX)*	MC4860H	4 THRU 5	3/8" OD	7/8" OD	17.5 x 38 x 24.00	90

*C – includes R-22 refrigerant coil and expansion valve.

CX – includes R-410A refrigerant coil and expansion valve.

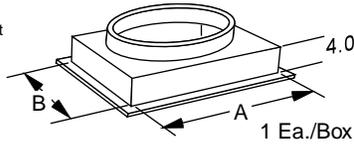
CHILLED WATER COOLING MODULE (Includes water coil*)

MFR. NO.	MAX. COOLING CAPACITY, BTUH	CONNECTIONS	DIMENSIONS H x W x D	SHIP WT.
MC3642W	54,600	7/8" OD	17.5 x 38 x 13.75	78
MC4860W	69,000	1-1/8" OD	17.5 x 38 x 18.00	105

* can also be used with hot water for 2-pipe systems

Return Grille & Filter

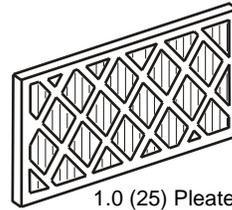
Includes throwaway filter, two duct bands, and clips.
Rough-in dimensions are shown.



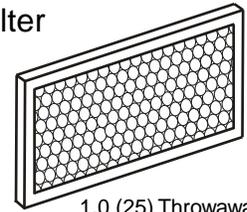
1 Ea./Box

P/N	Duct Dia.	Dimensions		Filter size
		A	B	
UPC-01-1218	12 (300)	20.25 (514)	14.25 (362)	14 x 20 (350 x 500)
UPC-01-2430	14 (350)	25.25 (631)	14.25 (362)	14 x 25 (350 x 625)
UPC-01-3642	18 (450)	30.25 (756)	14.25 (362)	14 x 30 (350 x 750)
UPC-01-4860	20 (508)	30.25 (756)	24.25 (594)	24 x 30 (610 x 750)
UPC-01-4860NC	20 (508)	30.25 (756)	20.25 (514)	20 x 30 (500 x 750)

Air Filter



1.0 (25) Pleated

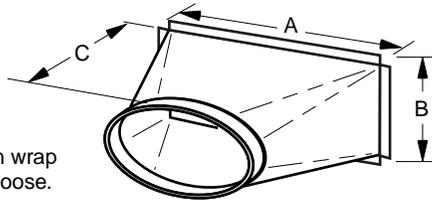


1.0 (25) Throwaway

P/N	SIZE	TYPE
A00558-001	14 x 25 (350 x 625)	Pleated
A00558-002	14 x 30 (350 x 750)	Pleated
A00558-003	18 x 20 (457 x 500)	Pleated
A00558-004	18 x 25 (457 x 625)	Pleated
A00558-005	18 x 18 (457 x 457)	Pleated
A00558-006	24 x 30 (610 x 750)	Pleated
A00097-005	14 x 25 (350 x 625)	Throwaway
A00097-006	14 x 30 (350 x 750)	Throwaway
A00097-007	14 x 20 (350 x 500)	Throwaway
A00097-008	14 x 38 (350 x 965)	Throwaway
A00097-009	24 x 30 (610 x 750)	Throwaway
A00097-010	20 x 30 (500 x 750)	Throwaway

Adapter, Return Air, Cooling Module

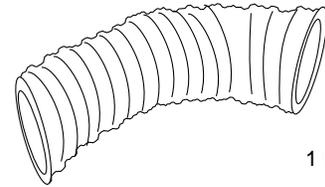
Includes insulation wrap shipped loose.



1 Ea./Box

P/N	Used On	Duct Dia.	Overall Dimensions		
			A	B	C
UPC-59-2430	2430	14 (350)	23 (575)	13.5 (338)	11.5 (288)
UPC-59-3642	3642	18 (450)	35 (875)	13.5 (338)	10.5 (263)
UPC-59-4860	4860	20 (508)	35 (875)	11.5 (292)	15.0 (381)

Return Air Duct

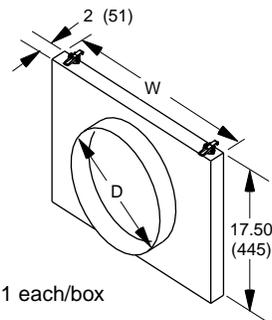


1 Ea./Box

- Tough Aluminized outer mylar wrap
- Spun-bonded nylon and helical wire core
- 1" (25 mm) Fiberglass insulation, R-4.2
- 10 ft (3050 mm) lengths

P/N	Used On	Dia.
UPC-04-1218	1218	12.0 (300)
UPC-04-2430	2430	14.0 (350)
UPC-04-3642	3642	18.0 (450)
UPC-04-4860	4860	20.0 (508)

Adapter, Return Air, Heating Module

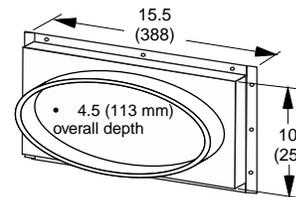


1 each/box

- Mates directly to Heating Module or Vertical Plenum Module
- No additional fabrication
- Can be used on either horizontal or vertical installations

Model	W	Duct Diameter
UPC-104-2430	25 (635)	14 (350)
UPC-104-3642	38 (965)	18 (450)
UPC-104-4860	38 (965)	20 (508)

Adapter, Return Air, M1218



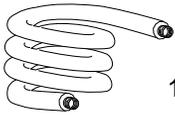
1 each/box

- Mates directly to air handler
- No additional fabrication
- Can be used on either horizontal or vertical installations

Model: UPC-104-1218
Duct Diameter: 12.0 (305)

Outlet Kits (1 Outlet)

- UPC-80F-1 Outlet Kit for 1-inch Fiberglass Plenum
- UPC-80M-1 Outlet Kit for Metal Plenum



1 — 12 ft. (3660 mm) Sound Attenuator



1 — Supply Outlet (White)



2 — Scrim Core Clamps (Stamped '575')



2 — Supply Tubing Clamps (Stamped '605', Painted Black)



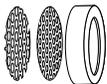
2 — Toggles and Screws



1 — Winter Supply Shutoff



1 — Coupling with Tape Rings



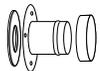
1 — Balancing Orifice Kit for one outlet, includes (1) balancing cap, (1) 35% reducer disk, and (1) 50% reducer disk

UPC-80F only



1 — Fiberglass Spin-In Take-off

UPC-80M only

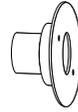


1 — Metal Take-off with gasket and tape ring

Installation Kits (6 or 8 Outlets)

- UPC-89F-6/8 Kit for 1-inch Fiberglass Plenum
- UPC-89F-1.5-6/8 Kit for 1.5-inch Fiberglass Plenum
- UPC-89M-6/8 Kit for Metal Plenum

Includes



6 / 8 — Supply Outlets (White)



12 / 16 — Scrim Core Clamps (Stamped '575')



12 / 16 — Supply Tubing Clamps (Stamped '605', Painted black)



12 / 16 — Toggles and Screws



1 — Balancing Orifice Kit for one outlet, includes (1) balancing cap, (1) 35% reducer disk, and (1) 50% reducer disk



6 / 8 — Winter Supply Shutoffs



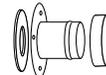
6 / 8 — Couplings with Tape Rings

UPC-89F only



6 / 8 — Spin-In Take-offs for Fiberglass Ductboard

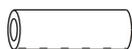
UPC-89M only



6 / 8 — Metal Take-offs with gasket and tape ring

Outlet Kits, Short (5 Outlets)

- UPC-84-5 Outlet Kit for 1-inch Fiberglass Plenum
- UPC-85-5 Outlet Kit for Metal Plenum



5 — 12" (300 mm) Rigid Attenuators



5 — Supply Outlets (White)



5 — Winter Supply Shutoffs



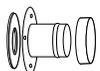
10 — Toggles and Screws

UPC-84-5 only



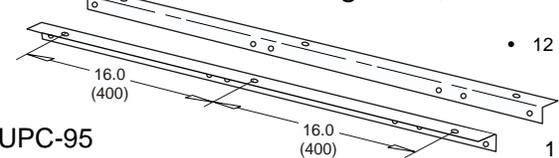
5 — Fiberglass Spin-In Take-offs

UPC-85-5 only



5 — Metal Take-offs with gasket and tape ring

Mounting Rails, M1218

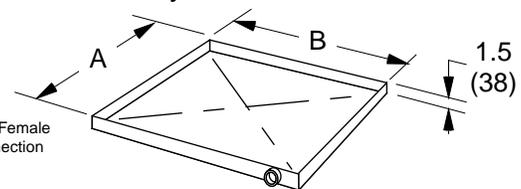


- 12 ga. steel

UPC-95

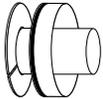
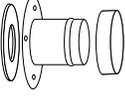
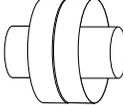
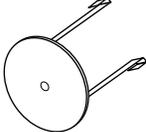
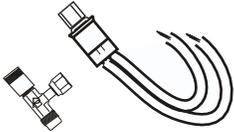
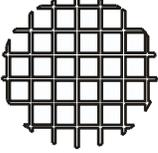
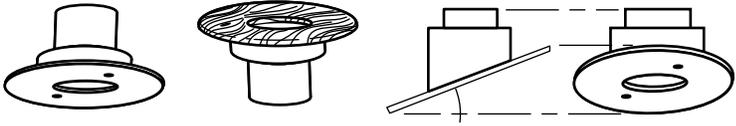
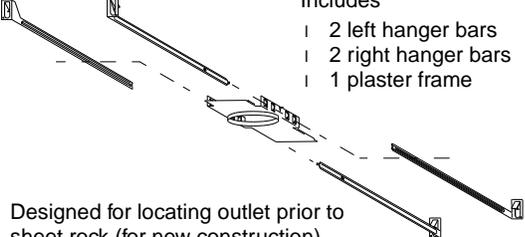
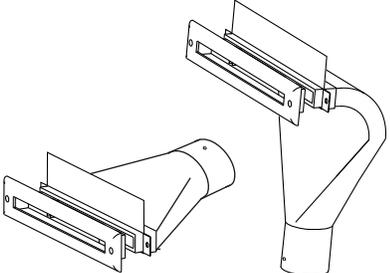
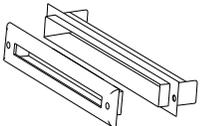
1 Set/Box

Secondary Drain Pan



- 3/4-inch (19 mm) Female PVC Socket Connection

P/N	Used On	No. of Modules	Overall Dimensions A x B	
UPC-94	1218	N/A	22.0 x 40.0	(559 x 1016)
UPC-20B	2430	2	27.0 x 29.5	(686 x 749)
UPC-20C	2430	3	27.0 x 41.8	(686 x 1060)
UPC-24B	3642	2	40.0 x 29.5	(1016 x 749)
UPC-24C	3642/4860	3/2	40.0 x 41.8	(1016 x 1060)
UPC-24D	4860	3	40.0 x 54.0	(1000 x 1372)

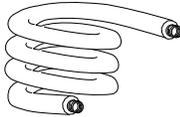
<p>Spin-In Takeoff</p>  <p>Use UPC-23B for 1-inch fiberglass Use UPC-22 for 1.5-inch fiberglass</p> <p>UPC-22/23B 1 Ea./Box</p>	<p>Metal Takeoff Pkg</p>  <p>Includes tape ring and gasket</p> <p>UPC-28 1 Ea./Box</p>	<p>Supply Duct Coupling</p>  <p>Includes supply tubing clamps and tape rings</p> <p>UPC-38C-10 10 Ea./Box</p>	<p>Winter Shutoff (2")</p>  <p>UPC-42-20 20 Ea./Box</p>
<p>Supply Tubing Clamp</p>  <p>For alum. core Stamped '605' Painted black</p> <p>UPC-52-50 50 Ea./Box</p>	<p>Scrim Core Clamp</p>  <p>For sound atten. core Stamped '575'</p> <p>UPC-53-50 50 Ea./Box</p>	<p>Clamp Pliers</p>  <p>UPC-54 1 Ea./Box</p>	<p>2" Hole Cutter</p>  <p>UPC-55-5 5 Ea./Box</p>
<p>Outlet Deflector</p>  <p>UPC-45-5 5 Ea./Box</p>	<p>Outlet Hardware Pkg</p>  <p>Includes A00094-001 Toggle A00314-001 #4-24 x 1.5 Machine Screw</p> <p>UPC-51 10 Ea./Pkg</p>	<p>Mild Weather Kit</p>  <p>For heat pumps operating in mild weather.</p> <p>UPC-65 1 Ea./Box</p>	<p>Outlet Screen</p>  <p>UPC-88-20 20 Ea./Box UPC-88-20-BLK</p> <p>Use -BLK to order Black, Chrome or Brass, please specify</p>
<p>Supply Outlet Terminator</p>  <p>UPC-56B UPC-57 15 or 25° UPC-58-1-XX XX = angle of ceiling</p> <p>UPC-56B Supply Outlet (white) w/ toggles and screws UPC-57 Unfinished Oak w/ Screen UPC-58-1-XX Angled Outlet (white) w/ toggles and screws</p>			<p>Plaster Frame Kit</p>  <p>Includes 2 left hanger bars 2 right hanger bars 1 plaster frame</p> <p>Designed for locating outlet prior to sheet rock (for new construction).</p> <p>UPC-86-5 5 Ea./Box</p>
<p>Slotted Outlet</p> <p>UPC-66 (Metal) UPC-67A (Plastic) UPC-68 (Plastic)</p> <ul style="list-style-type: none"> • factory insulated • fits in standard 2 x 4 construction • includes mounting bracket with hanger bars • includes a white plastic trim plate, also available in metallic silver, brass, or unfinished wood.  <p>UPC-68 UPC-66/67A</p> <p>1 Ea. \ Box</p> <p>Accessories: Mounting Bracket: UPC-67-BRKT</p>	<p>Plenum Outlet</p>  <ul style="list-style-type: none"> • mounts directly to plenum • includes mounting bracket and screws • includes a white plastic trim plate, also available in metallic silver, brass, or unfinished wood. <p>UPC-101 1 Ea. \ Box</p>		

Outlet Balancing Orifice Package

-  15% Reduction (1-7/16" (36mm) hole) — 5 / Pkg
-  35% Reduction (1-1/8" (28 mm) hole) — 5 / Pkg
-  50% Reduction (15/16" (23 mm)hole) — 5 / Pkg
-  Winter Shutoff (2-1/8" (53 mm)) — 15 / Pkg

UPC-36-15

Supply Tubing



2" (50 mm) ID

- Tough Aluminized mylar outer wrap
- Two-ply aluminum core
- Fully insulated, (R-4.2 equivalent)
- 25 ft (7625 mm) lengths
- Certified as an Air Duct per UL181

Part No.	Ea/Box	OD, in. (mm)	R-Factor
UPC-25-1	1	3.5 (89)	R-3.2 (R-4.2**)
UPC-25-4	4	3.5 (89)	R-3.2 (R-4.2**)
UPC-25-R4-4	4	4.0 (102)	R-4.2 (R-5.8**)
UPC-25-R6-4	4	5.0 (127)	R-6.0 (R-9.2**)
UPC-25-R8-4	4	6.1 (152)	R-8.0 (R-13.2**)

** equivalent insulation factor. Rated R-factor is based on flat wall insulation

Sound Attenuator



2" ID (50 mm)

- Tough Aluminized mylar outer wrap
- Spun-bonded nylon and helical wire core
- Fully insulated
- 12 ft (7625 mm) lengths
- Certified as an Air Duct per UL181

6 Ea./Box

Part No.	OD, in. (mm)	R-factor
UPC-26C-6	3.5 (89)	R-3.2 (R-4.2**)
UPC-26CR4-6	4.0 (102)	R-4.2 (R-5.8**)
UPC-26CR6-6	5.0 (127)	R-6.0 (R-9.2**)
UPC-26CR8-6	6.1 (152)	R-8.0 (13.2**)

** equivalent insulation factor. Rated R-factor is based on flat wall insulation

Takeoff Balancing Orifice Package

-  UPC-30 15% Reduction (Cap) — 15 / Pkg
-  UPC-31 35% Reduction (Perf. disk) — 5 / Pkg
-  UPC-32 50% Reduction (Perf. disk) — 5 / Pkg

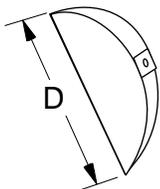
UPC-35-15

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Round Metal Plenum Fittings

Splitter Vane



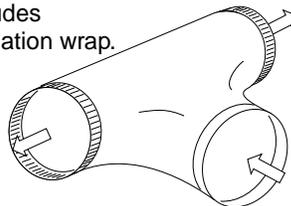
Includes screws and washers.

4 Ea./Box

Model	D
UPC-11-07R-4	7.0 (178)
UPC-11-09R-4	9.0 (229)
UPC-11-10R-4	10.0 (254)

Reducer Tee

Includes insulation wrap.



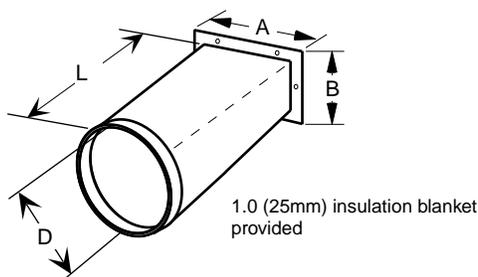
1 Ea./Box

UPC-19V-090707
9 x 7 x 7 (225 x 175 x 175)

UPC-19V-100909
10 x 9 x 9 (254 x 225 x 225)

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Supply Air Plenum Adapter, Round



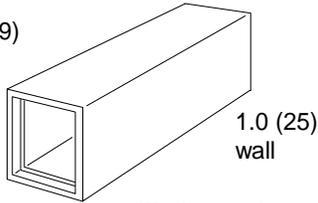
1 Ea. \ Box

P/N	Used On	Overall Dimensions			Dia. D
		A	B	L	
UPC-61-1218 (same as UPC-93)	1218	8.0 (203)	4.75 (121)	12.0 (305)	7.0 (178)
UPC-61-2430	2430	7.5 (191)	8.0 (203)	12.0 (305)	7.0 (178)
UPC-61-3642	3642	8.68 (220)	8.0 (203)	18.0 (457)	9.0 (229)
UPC-61-4860	4860	11.63 (295)	8.0 (203)	18.0 (457)	10.0 (254)

Square Fiberglass Ductboard Plenum and Fittings

Fiberglass Straight Duct

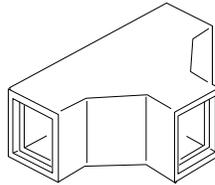
6 ft. (1829)
lengths



Part No.	ID dimension
UPC-12-065S6-4	6.5 x 6.5 (163 x 163)
UPC-12-085S6-4	8.5 x 8.5 (216 x 216)
UPC-12-095S6-4	9.5 x 9.5 (241 x 241)

4 Ea./Box (8 Ea./Box Flat -8F)

Full Flow Fiberglass Tee

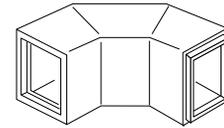


1.0 (25)
wall

Part No.	ID dimension
UPC-16V-065S-X	6.5 x 6.5 (163 x 163)
UPC-16V-085S-X	8.5 x 8.5 (216 x 216)
UPC-16V-095S-X	9.5 x 9.5 (241 x 241)

X-designates no. in box, either 1 or 4
Includes Splitter Vane

90° Fiberglass Elbow

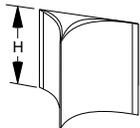


1.0 (25)
wall

Part No.	ID dimension
UPC-18-065S-X	6.5 x 6.5 (163 x 163)
UPC-18-085S-X	8.5 x 8.5 (216 x 216)
UPC-18-095S-X	9.5 x 9.5 (241 x 241)

X-designates no. in box, either 1 or 4

Fiberglass Duct Splitter Vane

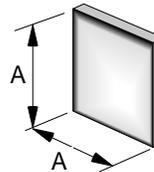


Includes screws
and washers.

Model	H
UPC-11-065S-4	6.38 (162)
UPC-11-085S-4	8.38 (213)
UPC-11-095S-4	9.38 (238)

4 Ea./Box

Fiberglass End Cap

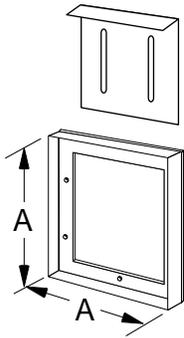


Model	A
UPC-15-065S-4	7.5 (191)
UPC-15-085S-4	9.5 (241)
UPC-15-095S-4	10.5 (267)

1.0 (25) wall

4 Ea./Box

Supply Air Plenum Adapter, Square



- Includes:
- restrictor plate
 - insulation tape
 - mounting screws

1 Ea./Box

P/N	Used On	Dimensions A	Duct size**
UPC-62-1218* (same as UPC-62)	1218	8.5 (216)	6.5 x 6.5 (165 x 165)
UPC-62-2430	2430	8.5 (216)	6.5 x 6.5 (165 x 165)
UPC-62-3642	3642	10.5 (267)	8.5 x 8.5 (178 x 178)
UPC-62-4860	4860	11.5 (292)	9.5 x 9.5 (241 x 241)

* Does not include restrictor plate

** Based on inside dimension of 1-inch (25 mm) fiberglass ductboard

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