



**VP(S,T)-VC(S,T) INFRARED HEATER RADIANT
PERFORMANCE IMPROVEMENT**
Applies to : **Gas-Fired, Tubular, Radiant,
Low-Intensity Infrared Heater
Models VPS, VPT, VCS, VCT**



All conversion must be done by a qualified service person in accordance with these instructions and in compliance with all codes and requirements. In Canada, gas conversion shall be carried out in accordance with the requirements of the Provincial Authorities having jurisdiction and in accordance with the requirements of the CAN/CGA-B149.1 and .2 installation code.

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation, and maintenance instructions thoroughly before installing or servicing this equipment.

FOR YOUR SAFETY

— WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Leave the building immediately.
- Immediately call your gas supplier from a phone remote from the building. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

— Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

DANGER: The conversion kit is to be selected and installed by a qualified service person in accordance with these instructions and in compliance with all codes and requirements of authorities having jurisdiction. Failure to follow instructions could result in death, serious injury, and/or property damage. The qualified agency performing this work assumes responsibility for this conversion.

Model type			VPS		VCS		VPT		VCT	
Size	Config.	Gas Type	Kit #	table #	Kit #	table #	Kit #	table #	Kit #	table #
60	20	Natural	1005050	1	1005058	9	1005050	1	1005058	9
		Propane	1005050	1	1005059	10	1005050	1	1005059	10
	30	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		1005050	1	n/a		1005050	1
	40	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
80	20	Natural	1005051	2	1005060	11				
		Propane	1005052	3	1005061	12				
	30	Natural	1005062	13	1005062	13	1005062	13	1005062	13
		Propane	1005050	1	1005063	14	1005050	1	1005063	14
	40	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
100	30	Natural	1005079	29	1005081	30	1005079	29	1005081	30
		Propane	1005053	4	1005064	15	n/a		1005064	15
	40	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		1005065	16	n/a		1005065	16
	50	Natural	n/a		n/a					
		Propane	n/a		n/a					
125	30	Natural					1005080	32	1005082	24
		Propane					1005055	33	1005061	12
	40	Natural	n/a		1005066	17	n/a		1005066	17
		Propane	n/a		1005061	12	n/a		1005061	12
	50	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
	60	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
150	40	Natural	1005054	5	1005067	18	n/a		1005067	18
		Propane	1005055	6	1005068	19	n/a		1005068	19
	50	Natural	n/a		1005069	20	n/a		1005069	20
		Propane	n/a		1005070	21	n/a		1005070	21
	60	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
	70	Natural	n/a		n/a					
		Propane	n/a		n/a					
170	50	Natural	n/a		1005071	22	n/a		1005083	31
		Propane	1005056	7	1005072	23	1005056	7	1005072	23
	60	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		1005074	25	n/a		1005074	25
	70	Natural	n/a		n/a		n/a		n/a	
		Propane	n/a		n/a		n/a		n/a	
	80	Natural	n/a		n/a					
		Propane	n/a		n/a					
200	50	Natural	1005057	8	1005075	25	1005057	8	1005075	25
	60	Natural	n/a		1005076	26	n/a		1005076	26
	70	Natural	n/a		1005077	27	n/a		1005077	27
	80	Natural	n/a		n/a					

**FIGURE 1 -
Fan Orifice Plate**



**FIGURE 2 - Heat
Exchanger Tubes**



Straight Heat Exchanger Tube, 10 ft,

**FIGURE 3- Tube Coupling
with Tightening Bolts and Two Self-drilling
Screws** (coupling has
pre-punched holes; self-drilling screws attach
coupling to tubes and vent pipe)



FIGURE 4 - One Section of Field-Installed Turbulator Strip



1.1 Changing the Fan Orifice Plate (see fig.1) (where reqd.)

Refer to tables 1 - 33 to determine which specific fan orifice plate requires changing.

The fan orifice plate is attached to the fan inlet. To remove..

- Firstly remove the ducted air connection if fitted.
- Remove the three screws holding the plate in position.
- Replace the new orifice plate using the existing screws.

1.2 Removing a Tube Coupling (see fig.3) (where reqd.)

If a tube is required replacing it is necessary to remove the tube coupling. To remove ...

- Firstly unscrew the two self-drilling screws.
- Using a 9/16" wrench and moving between bolts, un-tighten and loosen the bolts.
- Slide the coupler off and away from the tubes.
- Retain for later use.

1.3 Changing the Heat Exchanger Tubes (see fig.2) (where reqd.)

Refer to tables 1 - 33 to determine the correct quantity of heat exchanger tube sections that are required and when and where they should be installed.

Important note: Before installation, wipe any excess corrosion inhibitor from the heat exchanger tubes. Failure to do so could result in excessive smoke from the surface of the tubes on first startup.

To remove a heat exchanger tube you are first required to remove the reflectors appropriate to the number of tube sections required to be changed. Each conversion kit table will advise to how many tube lengths will be required to be removed. Once familiarized, then

- Loosen the fixing screws on the reflector support brackets to be removed.

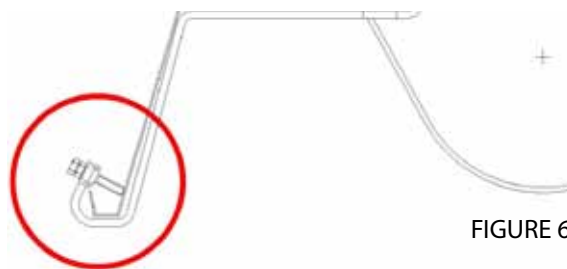


FIGURE 6

- Withdraw the appropriate amount of reflectors to expose the tubes.
- Unscrew the retaining bolt from the tube strap of the reflector support brackets and remove brackets.

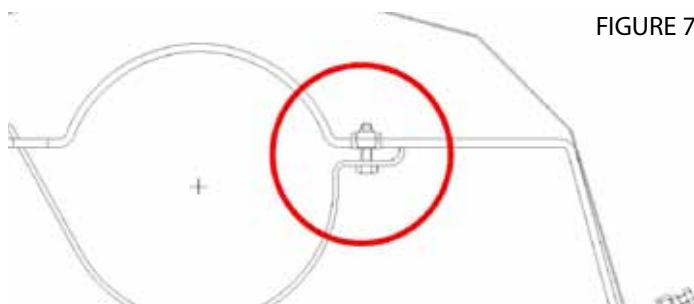


FIGURE 7

- Loosen the tube straps from the type 'H' suspension brackets and remove strap.



FIGURE 8

- e) Remove the coupler as explained in section 1.2
- f) Withdraw the required tube section(s) through the suspension brackets.
- g) Locate and position new heat exchanger tube(s) through the suspension brackets.
- h) Using the existing coupler and with the bolts toward the bottom, slide the compression coupling onto the end of the existing suspended combustion chamber tube. Slide the end of the new heat exchanger tube into the other side of the coupling.
- j) With both tube ends as far into the coupling as they will go, using a 9/16" wrench tighten the coupling bolts moving between each bolt in sequence.

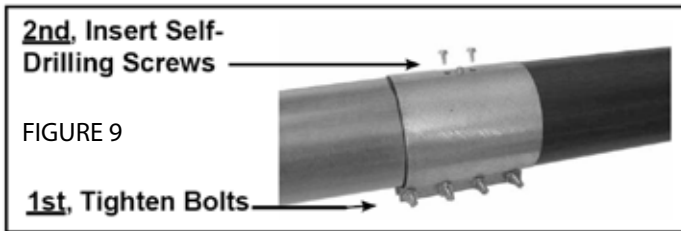


FIGURE 9

- k) In the top, insert the two self-drilling screws to secure the coupling to each tube. Use the same procedure to join all heat exchanger tubes (where necessary). Tubes must be suspended in their suspension brackets as they are installed. Repeat the instructions shown previous to join all of the remaining heat exchanger tubes.
- l) Re-attach the tube straps to the type 'H' suspension brackets and fix in position (see below).

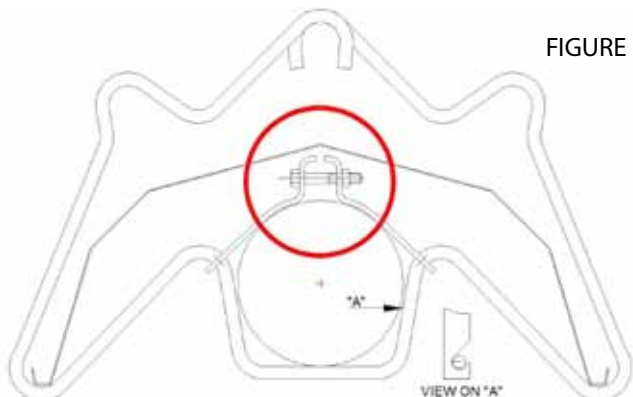


FIGURE 10

- m) Reposition the reflector support brackets in position on

the tube. Screw the retaining bolt in the tube strap of each bracket (shown ringed) .

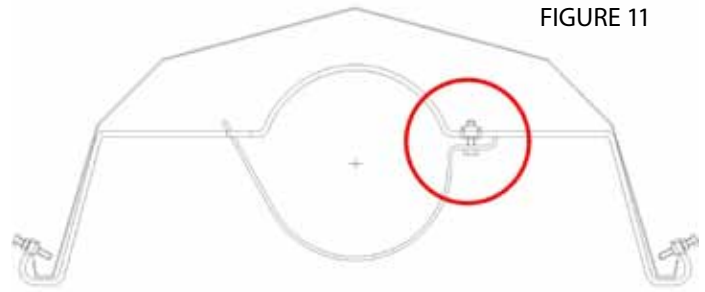


FIGURE 11

- n) Replace the correct amount of reflectors in place. Each subsequent reflector must OVERLAP the previous to the end of the reflector run.
- p) Tighten the fixing screws on all the reflector support brackets (shown below) correctly, depending if it is a fixed or sliding version. Fixed and Sliding brackets should follow in sequence.

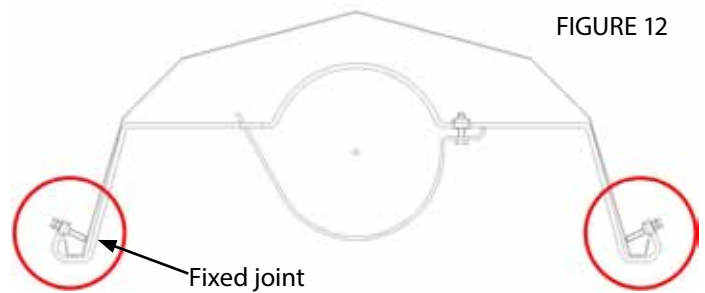


FIGURE 12

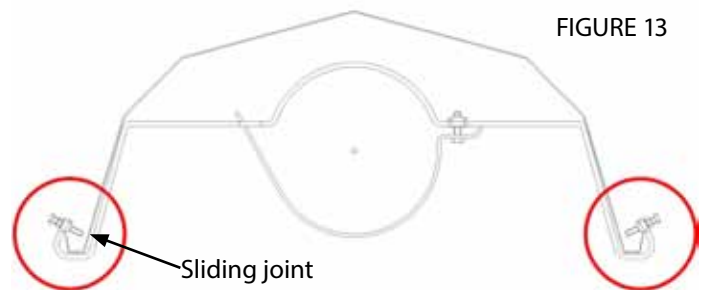
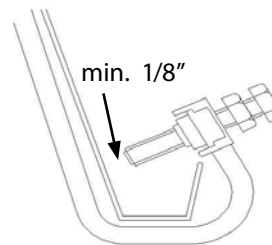


FIGURE 13



On a 'sliding joint' bracket leave a 1/8" minimum gap to allow reflector(s) to slide with the expansion and contraction of the heater.

FIGURE 14

1.4 Installing the Turbulator Strip(s) (see fig.4) (where reqd.)

Refer to tables 1 - 33 to determine the correct quantity of turbulator sections required and when and where they should be installed.

Locate turbulator strip sections. Install a turbulator strip into the open end of the last tube only after it has been suspended and connected to the previous tube.

Install the turbulator strip by sliding a section into the end of the tube, connecting the next section (see fig 15 and 16 opposite), and sliding the connected sections on into the tube(s). to form the correct length (see fig 17)

FIGURE 15 - Turbulator Strip Sections

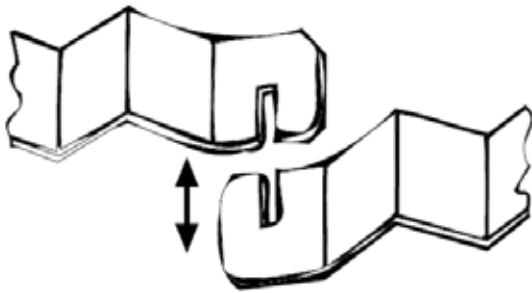
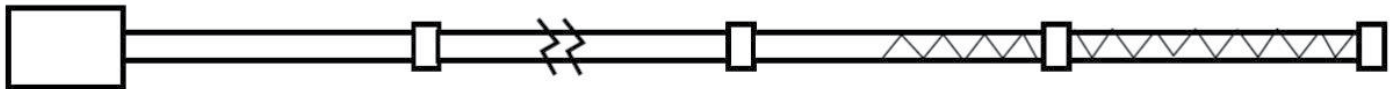


FIGURE 16 - As turbulator strip is installed in the tube, interlock the sections.



FIGURE - 17 (below) - Turbulator strip in situ .



TABLES 1 - 33

List of components included in each conversion kit as well as the heater(s) to which that kit applies. Ensure correct kit is chosen for model required.

TABLE 1 - Conversion kit, P/N 1005050		
Applies to models VPS60N20; VPS60P20; VPS80P30; VCS60P30; VPT60N20; VPT60P20; VPT80P30; VCT60P30		
Components		
Qty.	P/N	Description
3	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 2 - Conversion kit, P/N 1005051		
Applies to models VPS80N20		
Components		
Qty.	P/N	Description
1	269923	Fan Orifice Plate
2	116019	Turbulator
2	120538	Short Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 3 - Conversion kit, P/N 1005052		
Applies to models VPS80P20		
Components		
Qty.	P/N	Description
4	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 4 - Conversion kit, P/N 1005053		
Applies to models VPS100P30		
Components		
Qty.	P/N	Description
1	269930	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 5 - Conversion kit, P/N 1005054		
Applies to models VPS150N40		
Components		
Qty.	P/N	Description
1	269931	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 6 - Conversion kit, P/N 1005055		
Applies to models VPS150P40		
Components		
Qty.	P/N	Description
5	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 7 - Conversion kit, P/N 1005056		
Applies to models VPS170P50; VPT170P50		
Components		
Qty.	P/N	Description
1	269931	Fan Orifice Plate
3	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 8 - Conversion kit, P/N 1005057		
Applies to models VPS200N50; VPT200N50		
Components		
Qty.	P/N	Description
1	269939	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 9 - Conversion kit, P/N 1005058		
Applies to models VCS60N20; VCT60N20		
Components		
Qty.	P/N	Description
3	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 13 - Conversion kit, P/N 1005062		
Applies to models VPS80N30; VCS80N30; VPT80N30; VCT80N30		
Components		
Qty.	P/N	Description
1	269923	Fan Orifice Plate
3	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 10 - Conversion kit, P/N 1005059		
Applies to models VCS60P20; VCT60P20		
Components		
Qty.	P/N	Description
2	116019	Turbulator
2	120538	Short Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 14 - Conversion kit, P/N 1005063		
Applies to models VCS80P30; VCT80P30		
Components		
Qty.	P/N	Description
3	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 11 - Conversion kit, P/N 1005060		
Applies to models VCS80N20		
Components		
Qty.	P/N	Description
1	269923	Fan Orifice Plate
2	116019	Turbulator
2	120538	Short Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 15 - Conversion kit, P/N 1005064		
Applies to models VCS100P30; VCT100P30		
Components		
Qty.	P/N	Description
1	269930	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 12 - Conversion kit, P/N 1005061		
Applies to models VCS80P20; VCS125P40; VCT125P30; VCT125P40		
Components		
Qty.	P/N	Description
4	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 16 - Conversion kit, P/N 1005065		
Applies to models VCS100P40; VCT100P40		
Components		
Qty.	P/N	Description
1	269930	Fan Orifice Plate
3	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 17 - Conversion kit, P/N 1005066

Applies to models VCS125N40; VCT125N40

Components		
Qty.	P/N	Description
1	269930	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 18 - Conversion kit, P/N 1005067

Applies to models VCS150N40; VCT150N40

Components		
Qty.	P/N	Description
1	269931	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 19 - Conversion kit, P/N 1005068

Applies to models VCS150P40; VCT150P40

Components		
Qty.	P/N	Description
5	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 20 - Conversion kit, P/N 1005069

Applies to models VCS150N50; VCT150N50

Components		
Qty.	P/N	Description
1	269931	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 21 - Conversion kit, P/N 1005070

Applies to models VCS150P50; VCT150P50

Components		
Qty.	P/N	Description
4	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 22 - Conversion kit, P/N 1005071

Applies to models VCS170N50

Components		
Qty.	P/N	Description
1	1005049	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 23 - Conversion kit, P/N 1005072

Applies to models VCS170P50; VCT170P50

Components		
Qty.	P/N	Description
1	269938	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
2	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 24 - Conversion kit, P/N 1005082

Applies to models VCT125N30

Components		
Qty.	P/N	Description
1	269936	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 25 - Conversion kit, P/N 1005074		
Applies to models VCS170P60; VCT170P60		
Components		
Qty.	P/N	Description
1	269938	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 26 - Conversion kit, P/N 1005075		
Applies to models VCS200N50; VCT200N50		
Components		
Qty.	P/N	Description
1	269939	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
3	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 27 - Conversion kit, P/N 1005076		
Applies to models VCS200N60; VCT200N60		
Components		
Qty.	P/N	Description
1	269939	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 28 - Conversion kit, P/N 1005077		
Applies to models VCS200N70; VCT200N70		
Components		
Qty.	P/N	Description
1	269939	Fan Orifice Plate
4	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 29 - Conversion kit, P/N 1005079		
Applies to models VPS100N30; VPT100N30		
Components		
Qty.	P/N	Description
1	269924	Fan Orifice Plate
3	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 30 - Conversion kit, P/N 1005081		
Applies to models VCS100N30; VCT100N30		
Components		
Qty.	P/N	Description
1	269924	Fan Orifice Plate
3	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 31 - Conversion kit, P/N 1005083		
Applies to models VCT170N50		
Components		
Qty.	P/N	Description
5	116019	Turbulator
1	150985	Accessory Box
1	270117	Calorized Tube
1	205549	Tube Shipping Carton
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 32 - Conversion kit, P/N 1005080		
Applies to models VPT125N30		
Components		
Qty.	P/N	Description
1	269930	Fan Orifice Plate
5	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

TABLE 33 - Conversion kit, P/N 1005055

Applies to models VPT125P30

Components

Qty.	P/N	Description
5	116019	Turbulator
1	150985	Accessory Box
1	D303058	Instruction Manual
1	147794	Zip Bag

NOTES:



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