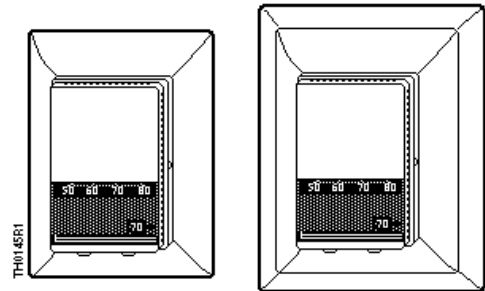


Powers™ Controls

TH 192 Adapter Kits



Description

The TH 192 Adapter Kits are designed to convert most existing pneumatic room thermostats to Powers TH 192 or 194 Series or **Free Energy Band™** TH 193 HC Thermostats.

The Universal Adapter Kit contains the parts needed for all conversions. Adapter Kits "A" and "B" do not contain all the parts that are included in the Universal Adapter Kit. Therefore, kits "A" and "B" are suitable only for specific conversions.

See Table 1 to select the required kit and also to locate the page where the parts used in a specific conversion are indicated.

Installation Instructions

The following general procedure applies for all thermostat installations. Notice that some installations will require the use of the adapter frame to cover up paint lines, broken walls, spots, etc. For installations not covered in this bulletin, remove the old terminal and connect directly to the tubing. See Figures 2, 3 and 4.

General Procedure

1. Remove old thermostat from the wall.
2. Remove terminal head and gasket from fitting.
3. Clean fitting surface if required.
4. See Table 1 and locate page on conversion being made.
5. Identify correct mounting parts and necessary instructions.
6. Proceed with the connections required. Secure all connections and install plug-in adapters to the 5/32-inch (4 mm) plastic tube. Use blue adapter for the air supply line.

NOTE: Either the polyethylene (hard) or polyurethane (soft) tubing is recommended on each specific conversion. This selection is based on the most compatible application.

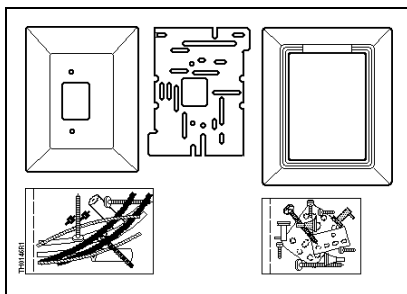
General Procedure, Continued

7. Place the multi-slotted metal plate into the plastic frame (plastic frame may or may not be needed), and attach to the terminal head or the wall using the screws and slots indicated.
8. Obtain the thermostat mounting plate and screws from the thermostat box.
9. Loosely screw adapter base to multi-slotted plate.
10. Draw plastic tubing through the multi-slotted plate, adapter base and install plug-in adapters on wall plate.
11. Using the key slotted holes, install wall plate on adapter base and fasten screws to secure wall plate and adapter base.
12. Carefully plug in thermostats to wall plate.

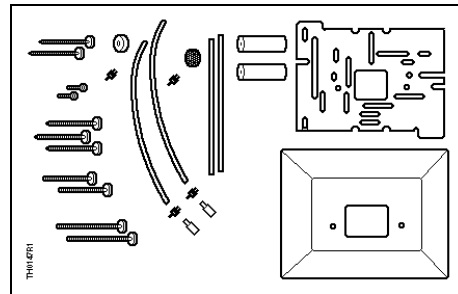
NOTE: To facilitate plugging the thermostat into O-rings in the adapter, wet or moisten the thermostat supply and return ports. This wetting or moistening will lubricate and allow the thermostat to slip through the O-rings more easily.

7. Install thermostat cover using Allen hex key tool P/N 192-497 to drive the two screws that hold the cover in place.
8. When removing the thermostat from the wall plate, hold the thermostat firmly at the top and bottom and start to pull the thermostat from the wall plate. At the same time, use a screwdriver to pry wall plate latch arm away from the thermostat chassis to release it. Do the same for the other side of the thermostat and pull the thermostat away from the wall plate.

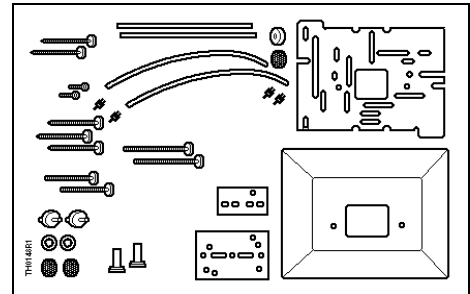
NOTE: Frequent removal and installation of the thermostat may bend the latch arms beyond their operating positions. If this happens, bend the latch arms back to their operating position before mounting the thermostat.



192-300 Universal Kit



192-483 Adapter Kit "A"



192-484 Adapter Kit "B"

Figure 1. Adapter Kits.

Table 1. Adapter Kit Selection Chart.

Thermostat Type	Type of Terminal	Figure Number	Use Kit No. 192-		
			300	483	484
POWERS CONTROLS TH 192 With Guard	—	5			
POWERS CONTROLS "D" Model 5, HU 190, TT 180, HT 190	Flush	6	X		
POWERS CONTROLS TH 180, 182, 192 to convert from horizontal to vertical installation	Flush Box	7		X	
	Surface	7		X	
HONEYWELL HO, HP, TO, TP, TRO 900	Surface Box	8		X	
	Flush Box	9	X		
HONEYWELL TP 410, 910 to 924, 933	Flush Banjo	10		X	
	Mortar Joint	11		X	
HONEYWELL TP 901 A, B	Flush Fitting	12			X
	Plaster Back	13			X
HONEYWELL TP 901 C	Mullion or Partition	14		X	
HONEYWELL TP 931	Flush Electrical Box	15		X	
HONEYWELL TP 970 to 974	Shallow Wall Box with Plaster Ring	16		X	
	Deep Wall Box	17		X	
JOHNSON T400,401,403,432,460,465, H101, 102,103,105	Flush Fitting	19	X		
	Old Round Head	21	X		
JOHNSON H & T 4000, 5000	Surface Fitting	18		X	
	Flush Box	20			X
ROBERTSHAW T18, T19, 32	Flush Box	22		X	
ROBERTSHAW H 10, 50, 52, T15, 16, 21, 25, 26, 30, 51, 52,	Surface Fitting	23		X	
	Mortar Joint	24	X		
BARBER COLMAN TK1001, 1101, 1201,1301, 1501 Thru 1513,1521 Thru 1525	Surface Box	26		X	
	Flush Electrical Box	28		X	
	Mortar Joint	27		X	
SWAN, BISHOP, BABCOCK	Flush Fitting	21	X		
DRAEGER (ITT), UPC	See <i>Note</i>	-	X		
Not listed in this Bulletin	0.125 O. D. Copper Tubing Terminal Head Removed	4	X		
	0.187 O. D. Copper Tubing Terminal Head Removed	4	X		

NOTE: On Draeger Thermostats, the air lines are normally 5/32-inch O.D. plastic tubing and the multi-slotted plate can be mounted using slots 1 and 14. On UPC Thermostats, the air lines are normally 1/4-inch O.D. plastic tubing and the multi-slotted plate can be mounted using slots 12 and 13.

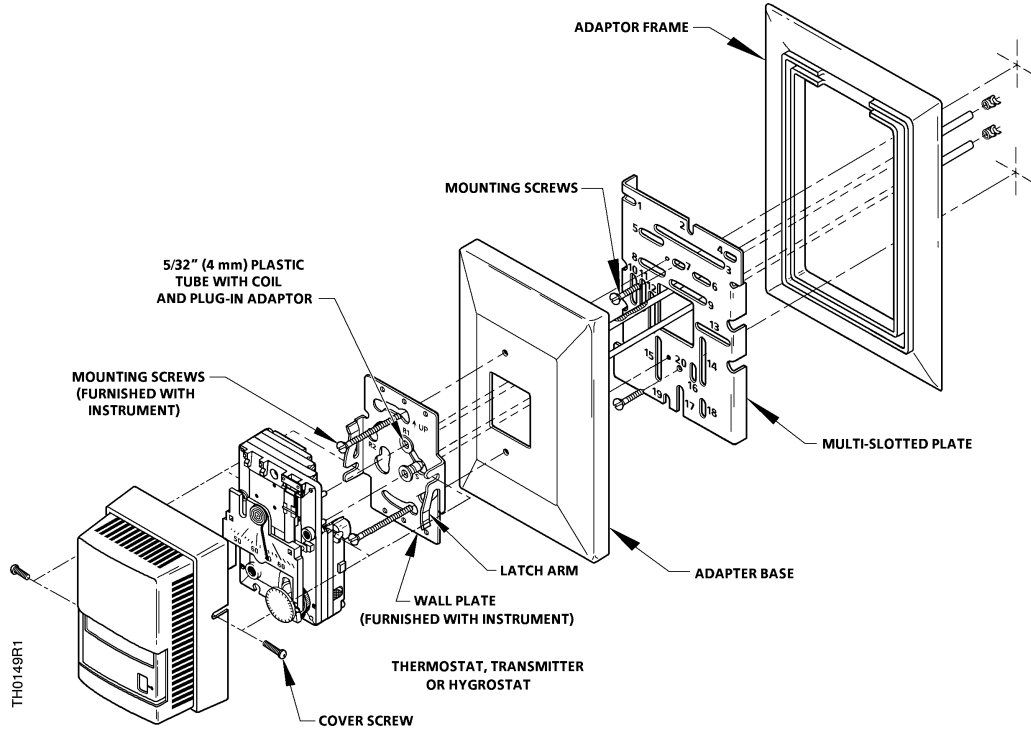


Figure 2. Thermostat Mounting with Universal Kit – Option 1.

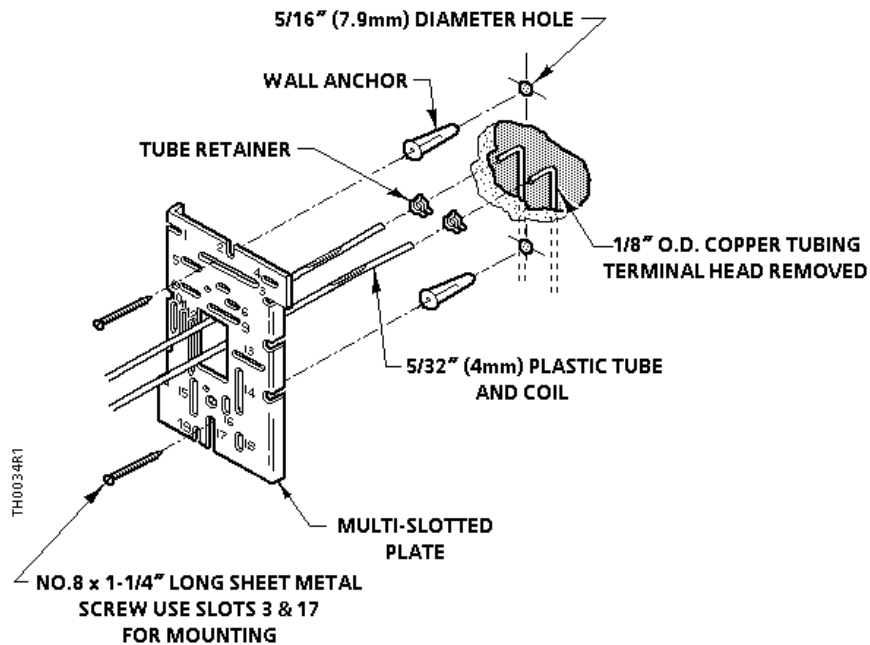


Figure 3. Thermostat Mounting with Universal Kit – Option 2.

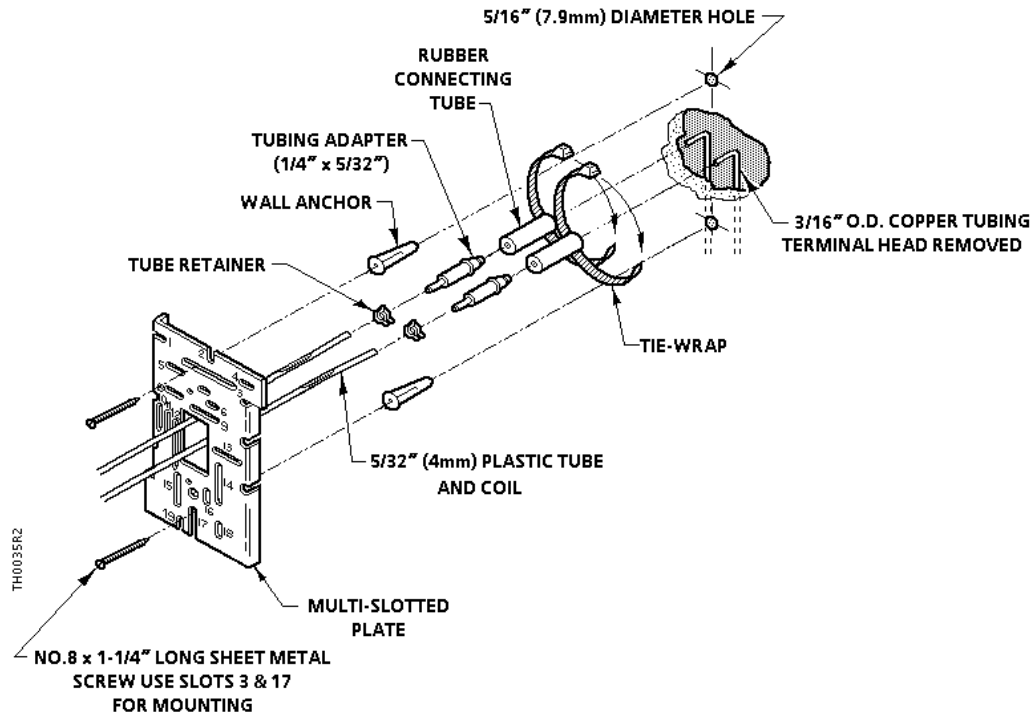
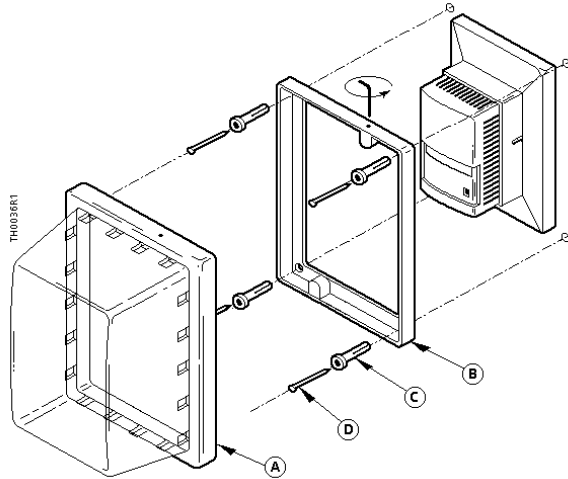


Figure 4. Thermostat Mounting with Universal Kit – Option 3.



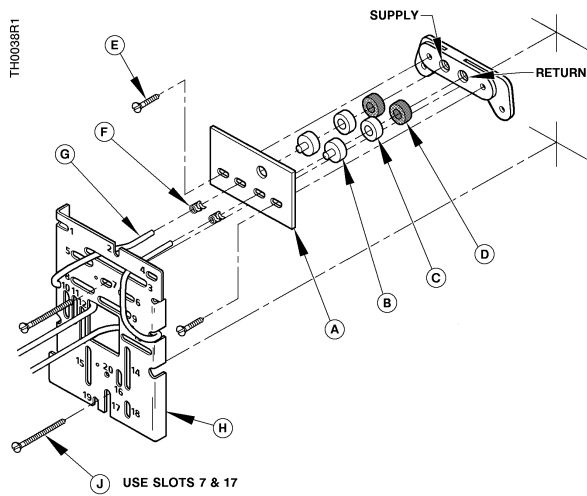
- A. Cover
- B. Frame
- C. (4) Anchor
- D. (4) Expander Nail

Installation Instructions

1. Put the flat side of frame against wall, mark the four hole locations and drill them 1/4-inch x 1-inch deep.
2. Insert the anchors through the frame and into the hole. Then drive the expander nails in. If the frame must be removed, the nails can be removed by turning them counterclockwise.
3. Mount cover over frame and turn each end locking screw five turns counterclockwise.

*See *Field Purchasing Guide* for Energygard ordering information.

Figure 5. Universal Kit with Thermostat and Energygard* Model P Guard.



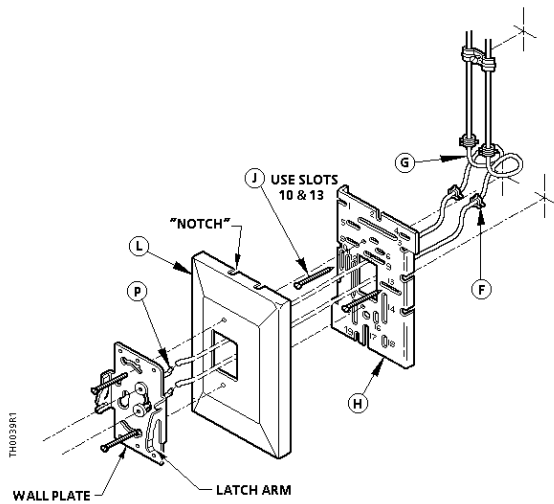
Required Parts for Installation

- | | |
|--|--|
| A. Terminal Plate (5-hole) | G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil |
| B. (2) Terminal Fitting | H. Multi-slotted Plate |
| C. (2) Holder | J. (2) No. 10 x 1-1/2 inch Sheet Metal Screw |
| D. (2) Gasket | *K. Adapter Frame |
| E. (2) No. 6-32 x 9/16-inch Long Flat Head Screw | *L. Adapter Base |
| F. (4) Tube Retainer | *P. (2) Plug-in Adapter |

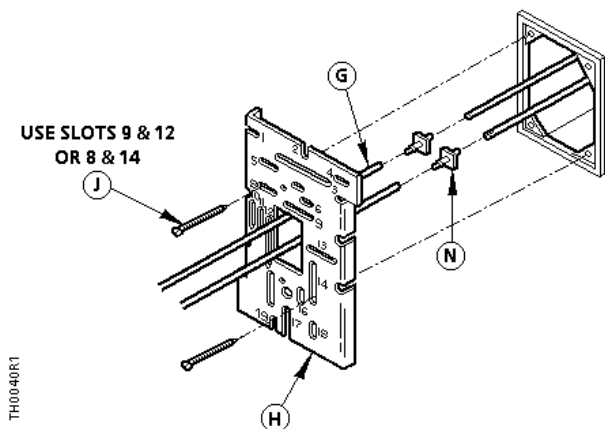
*Items not shown. See Figure 2 for proper installation.

Figure 6. Powers Controls "D" Model 5, HU 190, TT 180, HT 190 Flush Box.

Surface Mounting



Flush Box

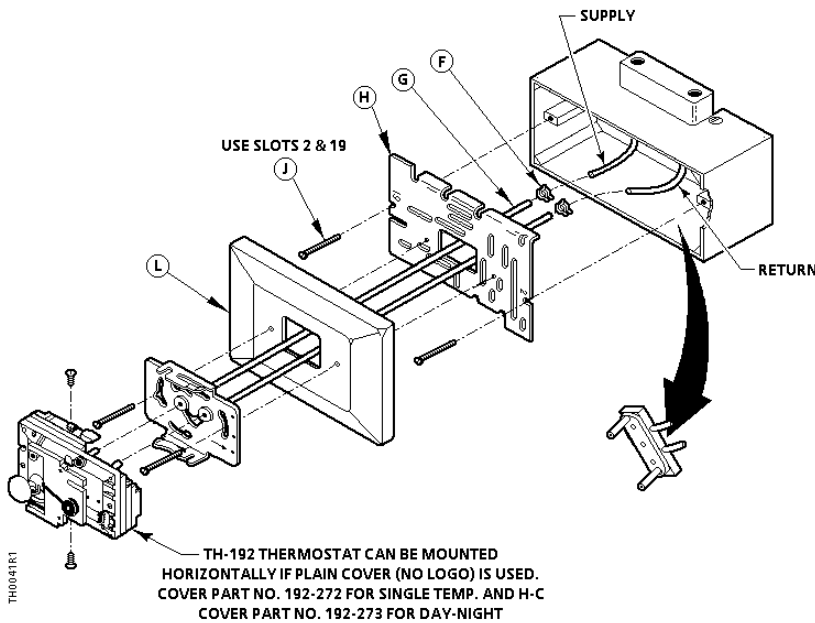


Required Parts for Installation

- | | |
|---|---|
| F. (4) Tube Retainer | *L. Adapter Base |
| G. (2) 5/32-inch (4mm) Plastic Tube (Polyethylene- Hard) and Coil | N. (2) Tubing Adapter (5/32-inch x 5/32-inch) |
| H. Multi-slotted Plate | *P. (2) Plug-in Adapter |
| J. (2) No. 6-32 x 1-inch Long Binder Head Screw | |

*Items not shown. See Figure 2 for proper installation.

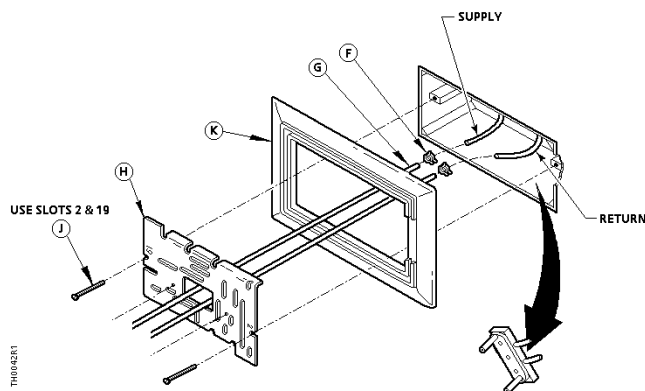
Figure 7. Powers Controls TH 180,182,192 Conversion From Horizontal To Vertical Installation.



Required Parts For Installation

- F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32-inch x 1-inch Long Binder Head Screw
 - L. Adapter Base
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

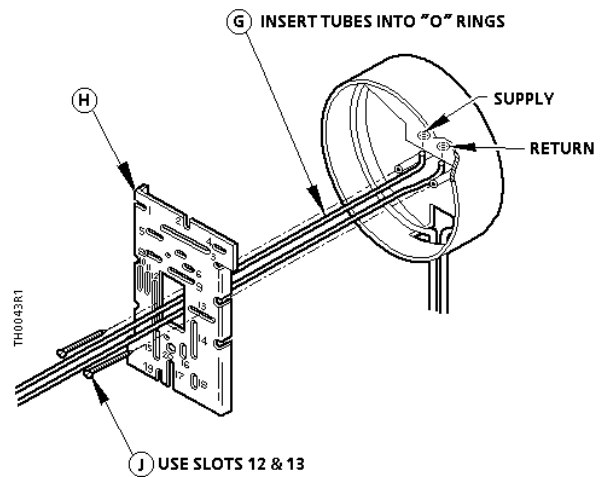
Figure 8. Honeywell HO, HP, TO, TP, TRO 900 Surface Box.



Required Parts For Installation

- F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32 x 1-inch Binder Head Screw
 - K. Adapter Frame
 - *L. Adapter Base
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

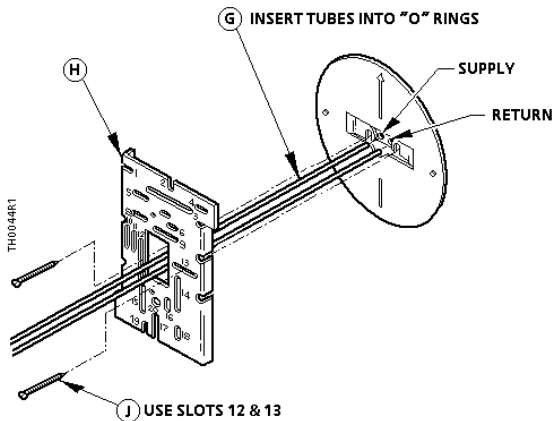
Figure 9. Honeywell HO, HP, TO, TP, TRO 900 Flush Box.



Required Parts For Installation

- F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32 x 5/8-inch Binder Head Screw
 - *L. Adapter Base
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

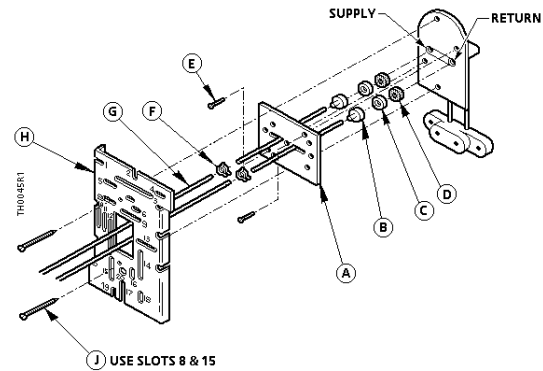
Figure 10. Honeywell TP 410, 910 To 924, 933 Flush Banjo.



Required Parts For Installation

- F. (2) Tube Retainer
- G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
- H. Multi-slotted Plate
- J. (2) No. 6-32 x 1-inch Binder Head Screw
- *L. Adapter Base
- *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

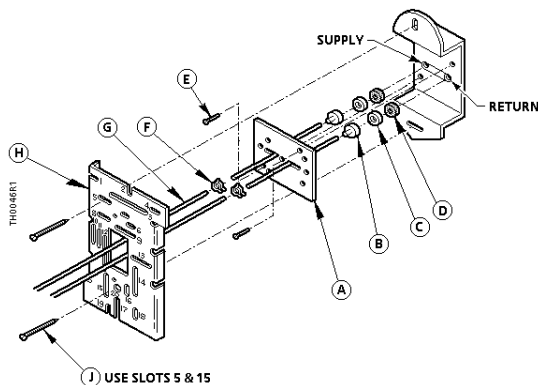
Figure 11. Honeywell TP 410, 910 To 924, 933 Mortar Joint.



Required Parts For Installation

- A. Terminal Plate (11-Hole)
- B. (2) Terminal Fitting
- C. (2) Holder
- D. (2) Gasket
- E. (2) No. 6-32 x 9/16-inch Flat-head Screw
- F. (4) Tube Retainer
- G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
- H. Multi-slotted Plate
- J. (2) No. 10 Sheet 6 -32 x 1-1/2 inch Pan Head Screws
- *L. Adapter Base
- *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

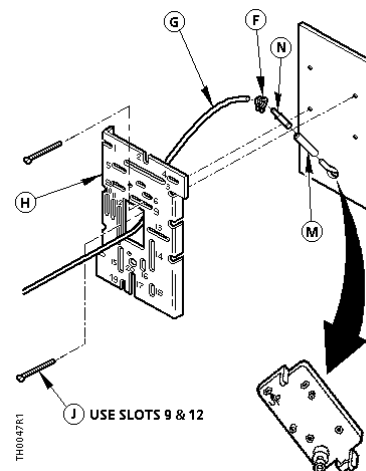
Figure 12. Honeywell TP 901A, B Flush Fitting.



Required Parts For Installation

- A. Terminal Plate (11-hole)
- B. (2) Terminal Fitting
- C. (2) Holder
- D. (2) Gasket
- E. (2) No. 6-32 x 9/16 inch Flat-head Screw
- F. (4) Tube Retainer
- G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
- H. Multi-slotted Plate
- J. (2) No. - 6-32 x 1-1/2 inch Pan Head Screws
- *L. Adapter Base
- *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

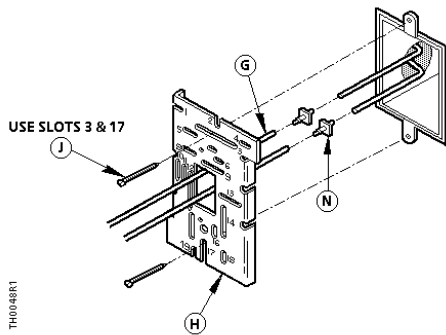
Figure 13. Honeywell TP 901A, B Plaster Back.



Required Parts For Installation

- F. (2) Tube Retainer
- G. (1) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
- H. Multi-slotted Plate
- J. (2) No. 6-32 x 1-1/2 inch Pan Head Screw
- *L. Adapter Base
- M. (2) Rubber Connecting Tube
- N. (1) Tubing Adapter (1/4 x 5/32-inch)
- *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

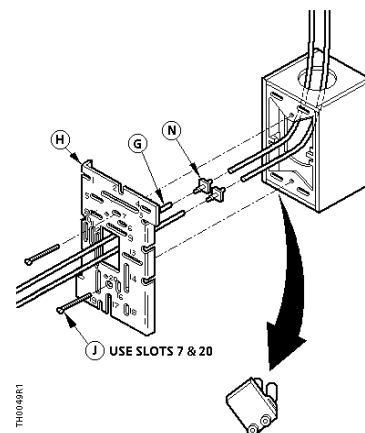
Figure 14. Honeywell TP901C Mullion or Partition.



Required Parts for Installation

- *F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No.6-32 x 1-1/2 inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (5/32-inch x 5/32-inch or 1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

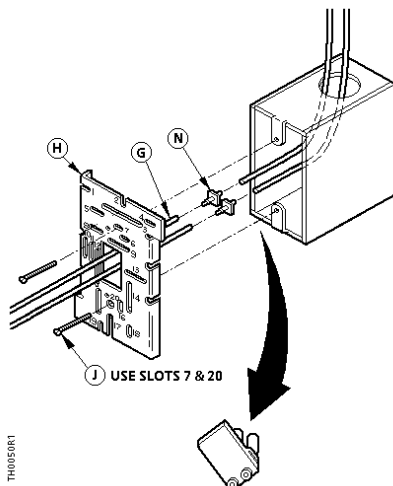
Figure 15. Honeywell TP 931 Flush Electrical Box.



Required Parts for Installation

- *F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No.6-32 x 1-1/2 inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (5/32-inch x 5/32-inch or 1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

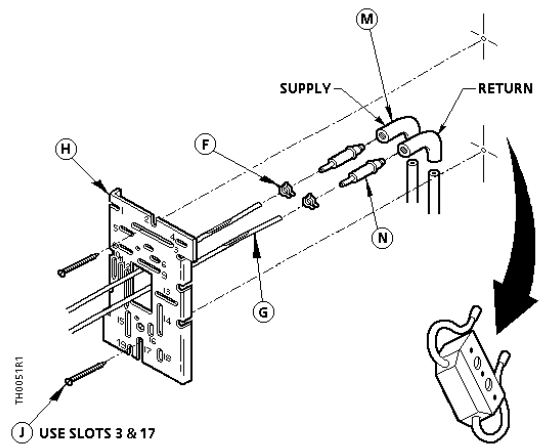
Figure 16. Honeywell TP 970-974 Shallow Wall Box with Plaster Ring.



Required Parts for Installation

- *F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No.6-32 x 1-1/2 inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (5/32-inch x 5/32-inch or 1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

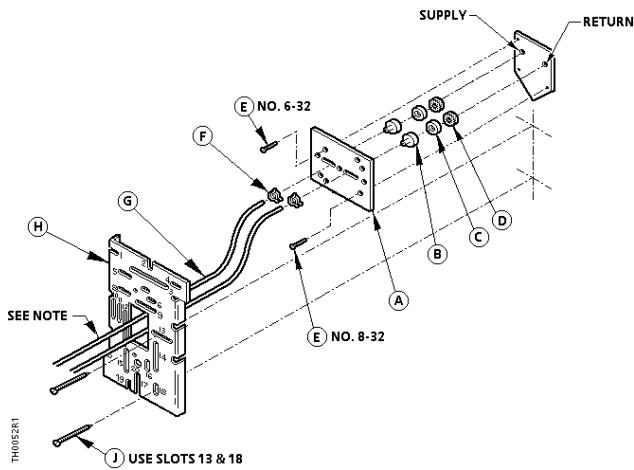
Figure 17. Honeywell TP 970-974 Deep Wall Box.



Required Parts for Installation

- F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No.10 x 1-1/2 inch Sheet Metal Screw
 - *L. Adapter Base
 - M. (2) Rubber Connecting Tube
 - N. (2) Tubing Adapter (1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

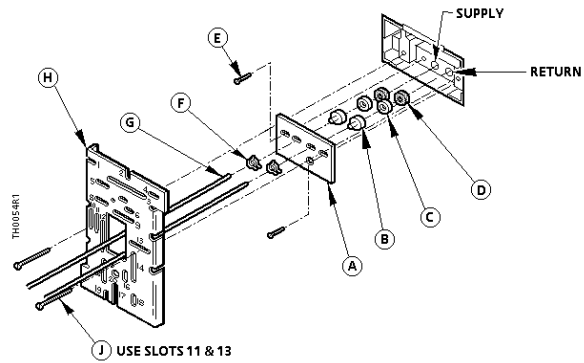
Figure 18. Johnson H & T 4000, 5000 Surface Fitting.



Required Parts for Installation

- A. Terminal Plate (11-hole)
 - B. (2) Terminal Fitting
 - C. (2) Holder
 - D. (2) Gasket
 - E. (1) No. 6-32 x 9/16-inch Flat-head Screw and
(1) No. 8-32 x 7/16-inch Long Binder Head Screw
 - F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. - 6-32 x 1-1/2 inch Pan Head Screw
 - *K. Adapter Frame
 - *L. Adapter Base
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

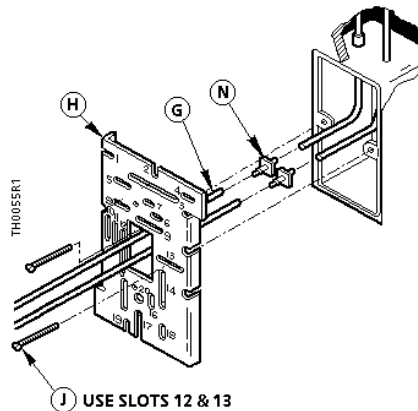
Figure 19. Johnson T400, 401, 403, 432, 460, 465, H101, 102, 103, 105 Flush Fitting.



Required Parts for Installation

- A. Terminal Plate (5-hole)
 - B. (2) Terminal Fitting
 - C. (2) Holder
 - D. (2) Gasket
 - E. (2) No. 6-32 x 5/8-inch Long Binder Head Screw
 - F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32 x 1-inch Long Binder Head Screw
 - *L. Adapter Base
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

Figure 20. Johnson H & T 4000, 5000 Flush Box.



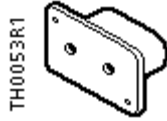
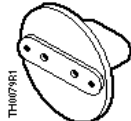
Required Parts for Installation

- F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No.6-32 x 1-1/2 inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (5/32-inch x 5/32-inch or 1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

Figure 22. Robertshaw T18, T19, 32 Flush Box.

**Johnson
 (Old Round Head) Bishop
 and Babcock**

Swan

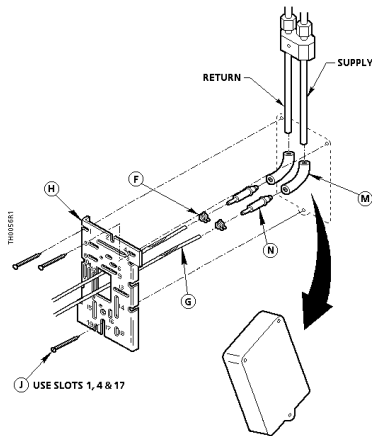


E. (2) No. 8-32 x 7/16-inch Binder Head Screw

E-(2) No.10-24 x 3/4-inch Head Screw

NOTE: If terminal head is too close to the wall surface, loop around plastic tubing as shown on Powers Controls "D" Thermostat Installation. See Figure 6.

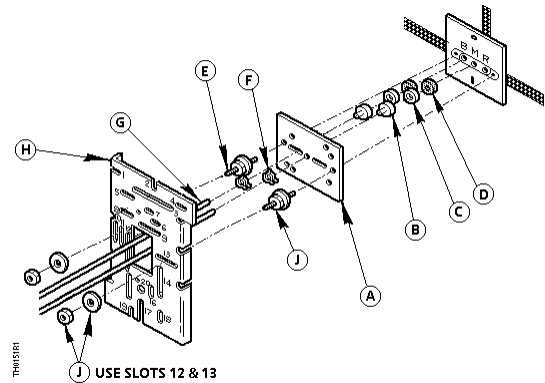
Figure 21. Swan, Bishop & Babcock Flush Fitting.



Required Parts for Installation

- F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (soft) and Coil
 - H. Multi-slotted Plate
 - J. (3) No.8 x 1-1/4 inch Sheet Metal Screw
 - *K. Adapter Frame (if required)
 - *L. Adapter Base
 - M. (2) Rubber Connecting Tube
 - N. (2) Tubing Adapter (5/32-inch x 5/32-inch or 1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

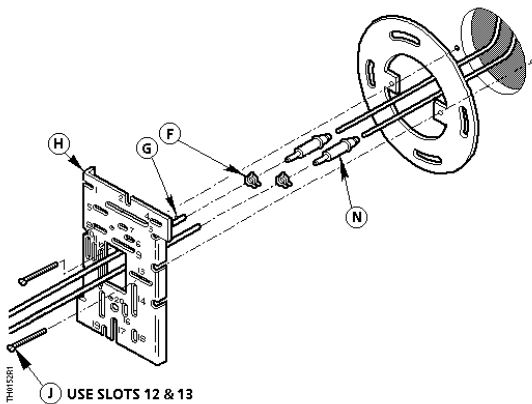
Figure 23. Robertshaw H 10, 50, 52, T15, 16, 21, 25, 26, 30, 51, 52 Surface Fitting.



Required Parts for Installation

- A. Terminal Plate (11-hole)
 - B. (2) Terminal Fitting
 - C. (2) Holder
 - D. (2) Gasket
 - E. (2) No. 5-40 x 3/4-inch Rod
 - F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (4) No. 5-40 Hex Nut and Washer
 - *L. Adapter Base
 - *P. Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

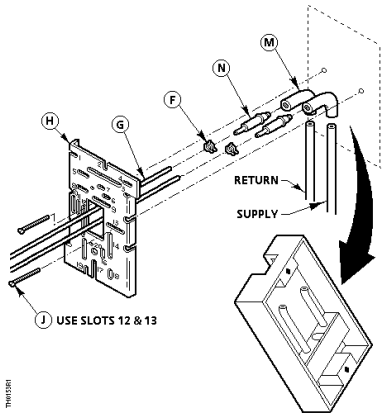
Figure 24. Robertshaw H 10, 50, 52, T15, 16, 21, 25, 26, 30, 31, 51, 52 Mortar Joint.



Required Parts for Installation

- F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 5-40 x 1-inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (1/4-inch x 5/32-inch or 5/32-inch x 5/32-inch)
 - *P. Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

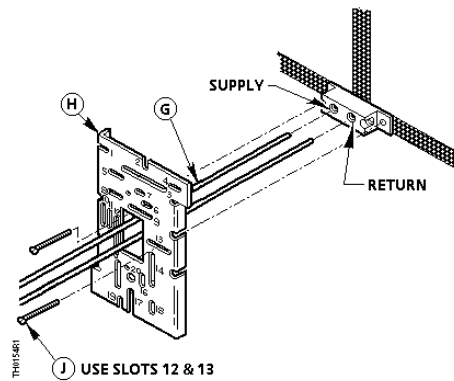
Figure 25. Robertshaw H 10, 50, 52, T15, 16, 21, 25, 26, 30, 31, 51, 52 Drywall, Mortar Joint or Surface.



Required Parts for Installation

- F. (4) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Soft) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 10 x 1-1/2 inch Sheet Metal Screw
 - *L. Adapter Base
 - M. (2) Rubber Connecting Tube
 - N. (2) Tubing Adapter (1/4-inch x 5/32-inch)
 - *P. (2) Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

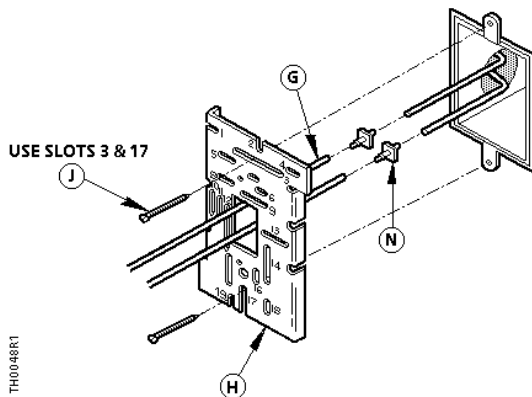
Figure 26. Barber Colman TK Series TK1001, 1101, 1201, 1301, 1501 through 1513, 1521 through 1525 Surface Box.



Required Parts for Installation

- F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32 x 1-inch Binder Head Screw
 - *L. Adapter Base
 - *P. Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

Figure 27. Barber Colman TK Series Mortar Joint.



Required Parts for Installation

- *F. (2) Tube Retainer
 - G. (2) 5/32-inch (4 mm) Plastic Tube (Polyethylene- Hard) and Coil
 - H. Multi-slotted Plate
 - J. (2) No. 6-32 x 1-1/2 inch Pan Head Screw
 - *L. Adapter Base
 - N. (2) Tubing Adapter (1/4-inch x 5/32-inch or 5/32-inch x 5/32-inch)
 - *P. Plug-in Adapter
- *Items not shown. See Figure 2 for proper installation.

Figure 28. Barber Colman TK Series TK1001, 1101, 1201, 1301, 1501 thru 1513, 1521 through 1525 Flush Electrical Box.

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