

OVERFLOOR DUCTS AND ASSOCIATED FITTINGS

IDENTIFICATION AND INSTALLATION

1.01 This section provides the identification and installation of the metal and vinyl overfloor ducts and their associated fittings.

1.02 This section is reissued to:

- Show B Rubber Floor Duct as MD
- Show Flexiduct No. 1, No. 2, and No. 22 as MD
- Add C Floor Duct and Fittings as replacement for the above MD items
- Add 152A Adapter.

1.03 For sealed conduit installations in hazardous locations, see Section 502-415-100—Telephone Sets, Explosive Atmospheres, General Requirements.



Avoid placing overfloor duct whenever possible and never place across floors in passageways leading to fire escape or exits, passageways used for through traffic, or principal passageways of any rooms.

2. PURPOSE

2.01 Overfloor duct systems in metal and vinyl are used to carry exposed wiring across floor surfaces where conduit or underfloor duct systems are not available. The system consists of lengths of duct equipped with the necessary fittings to provide the wire or cable capacity required by the particular installation.

2.02 Metal duct consists of a metal base which is secured to the floor surface and a metal cover which is fastened to the base after the system wiring is installed. (See Fig. 1 and 2.)

2.03 Vinyl and rubber ducts consist of lengths of specially molded channel or tubing that are secured to floor surfaces through use of special

cement or double-faced adhesive cloth tape. (See Fig. 3, 11, and 13.) Wiring is installed as follows:

- Floor Duct (AT-8693)—either fished after duct is secured to the floor or laid into the duct by slitting the underside of the duct before it is secured to the floor.
- Flexiduct System (AT-7563X) MD—either fished after duct is secured to the floor or laid into the duct by slitting the underside of the duct before it is secured to the floor.
- B Rubber Floor Duct (AT-7016) MD—has an open area on the underside which bridges the wiring.

3. ORDERING GUIDE

A. For Metal Overfloor Duct (See Fig. 1, 2, and Table A)

- Florduct No. 711A
- Florduct No. 733A
- Wiremold No. 1500
- Wiremold No. 2600
- Wiremold No. 2800

Associated Fittings (Order by part number and nomenclature)

- Florduct—see Fig. 2, 8, 9, and Table C
- Wiremold—see Fig. 1, 4, 5, 6, 7, 9, and Table B

B. For Vinyl Overfloor Duct (See Fig. 13, Tables D and E)

- C Floor Duct No. 1 (AT-8693), 401192455

NOTICE

Not for use or disclosure outside the
Bell System except under written agreement

SECTION 461-350-100

- C Floor Duct No. 2 (AT-8693), 401192463
- C Floor Duct No. 3 (AT-8693), 401192471

Associated Fittings (See Table E)

- Junction Fitting, C Floor Duct (AT-8693), 401192448
- Riser Fitting, C Floor Duct (AT-8693) 401192430

C. Tools and Apparatus Required

- Wiremold 656 Duct Cover Removal Tool (Fig. 12). Used to remove covers of No. 1500 and No. 2600 ducts.
- Mineral Cement, Plastikon No. 169. Used to bond vinyl and rubber duct to any floor surface.
- Double-faced adhesive cloth tape.

4. COLOR

- Metal overfloor duct and fittings are available in a neutral gray enamel or natural metallic finish.
- C floor duct and fittings are available in black only.

5. INSTALLATION

A. Metal Overfloor Duct

Preparation

- (1) Cut duct to desired length using hacksaw equipped with fine-toothed blade.
- (2) File all rough edges smooth to prevent wire abrasion and safety hazard on subsequent use by craftspeople.
- (3) When using duct at fitting or between two fittings, cut smaller size covers (No. 711A Florduct and No. 1500 Wiremold) 3/8-inch shorter than their bases. Cut larger size covers (No. 733A Florduct and No. 2600 Wiremold) 5/8-inch shorter than their bases. Covers of the associated fittings will cover cut ends.

(4) Where two lengths of duct are butted together, covers should be cut to overlap joint.

(5) When installing metal duct fittings, use long-nosed pliers to remove twist-out. Remove smallest twist-out that will fit duct.

◆WARNING: When removing twist-outs from junction box and floor outlets, hold with suitable pad to prevent injury to hands.◆

(6) Check positioning of No. 2800 Wiremold duct and fittings to align cover screws with holes in bases.

Installing

5.01 Install metal overfloor ducts, except No 2800 Wiremold, as follows:

- (1) Remove covers from all fittings and fasten fitting bases to floor surface (see Table F for fasteners).
- (2) Insert duct base under raised locking tabs of fitting bases and secure duct base to floor surface.
- (3) Place wires or cables in duct bases. Use retaining clips (furnished with duct) as necessary.
- (4) Make wire terminations at each outlet as required.

Note: Insert telephone set mounting cords through rubber stems before terminating at telephone outlets and service fittings.

(5) Snap metal duct cover in place by laying it directly over base and, starting at one end, applying pressure along the entire length.

(6) Fasten covers to floor outlets.

5.02 Install No. 2800 Wiremold as follows:

- (1) Repeat steps (1) through (4) in 5.01.
- (2) Lay duct cover on base and align predrilled holes in cover with holes in base flanges.

- (3) Secure cover to base using No. 8 self-tapping screws furnished with duct.
- (4) Fasten covers to floor outlets.

5.03 When using the 739A and 751A Florduct outlets, attach to the duct as follows:

- (1) Place outlets in position over metal duct and centerpunch duct through holes in outlet (see Fig. 2).
- (2) Drill No. 30 holes through metal duct cover and flange on base at points marked.
- (3) Attach outlet using No. 8 1/2-inch RH self-tapping sheet metal screws (not furnished).

Removal

5.04 To remove covers of No. 1500 and No. 2600 Wiremold duct, use the Wiremold 656 tool as follows (Fig. 12):



Do not pry toward body.

- (1) Insert sharpened edge of tool between cover and base and pry cover toward rounded edge of tool.

Note: Ends of tool are marked to correspond with size of wiremold. Use correct end to prevent damage to duct.

- (2) Relocate tool and repeat prying process at several points along a length of duct.

Do not try to lift large section at once as this may damage duct cover.

B. Rubber Duct MD Flexiduct MD, and AT-8693 C Floor Duct and Fittings.

Preparation

5.05 Floor area must be clean and entirely free of wax or grease. Materials that may be used in cleaning floor surfaces include:

- Trichloroethane



Ventilate room when using trichloroethane; avoid inhaling fumes.

- Scouring powders

Note: Scouring powders require the use of water for proper rinsing. This will cause floor to dry more slowly affecting the setting time of the water soluble cement.

- (1) Position duct and fittings on floor, match up joints, and trim as necessary for proper fit. Duct and fittings may be cut with saw or water-wetted knife.



Use caution when cutting duct and fittings with saw or knife to prevent personal injury.

- (2) Outline duct and fitting locations on floor with pencil.

5.06 Cementing method of installing:

When using AT-8693 C Floor Duct Junction or Riser with C Floor Duct (Fig. 13) or when using the No. 345 combination fitting MD, used with Flexiduct (Fig. 11), remove cover and apply sufficient cement to floor area and to bottom of baseplate so that it just squeezes through the small holes in baseplate. Press baseplate firmly down on floor surface; allow cement to set.

Note: Cement should set within one hour. Install Flexiduct MD or C Floor Duct as follows:

- (1) After floor is cleaned, dry and reasonably dust free, lay wires or cables along proposed route.
- (2) Insert or fish wires into C Floor Duct or Flexiduct.
- (3) Apply even layer of cement to all surfaces of duct that will contact floor. Lay parts aside until cement becomes tacky. The C Floor Duct, AT-8693, is supplied in five foot lengths with preapplied adhesive backing.

Note: The C Floor Duct, AT-8693 is not to be used as a permanent installation.

- (4) Check penciled outline when locating duct and press duct firmly to floor surface. Rubber duct (MD) must be layed over wires.

- (5) Where wires or cables leave an outlet or fitting, secure them to avoid excessive pull on the outlet.
- (6) Make wire terminations and install outlet covers.
- (7) After duct and fittings are in place, remove excess cement with putty knife or cloth moistened with solvent. Place weights on duct until cement sets. Avoid excessive weight pressure on center of duct to prevent rising of edges.

Note: When using No. 345 combination fitting (MD) as an ELL, Tee, or junction box, but not as a riser, fasten cover to baseplate with screws provided and insert cap from top. When using fitting as a riser, insert rubber stem from underside of cover, insert telephone cord, and then fasten cover to baseplate. **◆**C Floor Duct Riser and junction fittings fasten to baseplate with screws provided.◆

5.07 Adhesive tape method of installing:

- (1) After floor is cleaned, dry and reasonably dust free, lay wires or cables along proposed route.
- (2) Position duct and fittings on floor, match up joints, and trim are necessary for proper fit. Duct and fittings may be cut with saw or water-wetted knife.



◆Use caution when cutting duct and fittings with saw or knife to prevent personal injury.◆

- (3) Outline duct and fitting locations on floor with pencil.
- (4) ◆Insert or fish wires into duct.◆
- (5) Remove protective layer from **one** side of double-sided tape and apply to floor using penciled outline. Press tape firmly in place.
- (6) Remove protective layer from other side of tape and press duct and fittings in place.

Removal

5.08 To remove vinyl overfloor duct:

Note: If linoleum or asphalt tile flooring is encountered, be careful not to loosen tile.

- (1) Remove wiring or cabling as necessary to clear duct and fittings.
- (2) Loosen one end of duct with chisel or similar tool.
- (3) Pull directly upward on duct. As end loosens, fold loose end back over itself and pull, keeping duct folded down as much as possible.
- (4) Remove fittings in a similar fashion.
- (5) Remove cement or double-faced tape remaining on floor with a cloth dampened with solvent.
- (6) Clean cement or double-faced tape from duct and fittings. Duct and fittings can be reused.

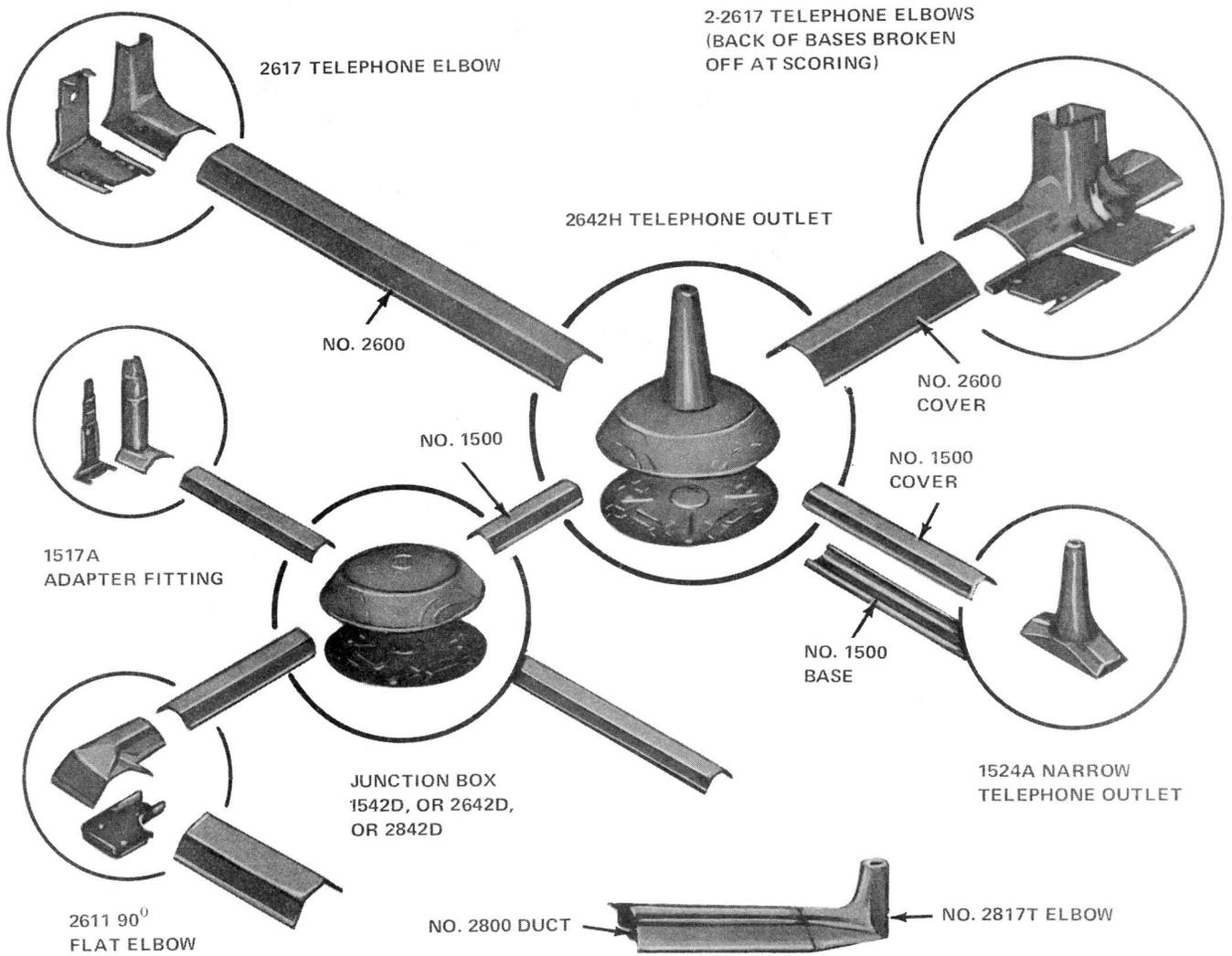


Fig. 1—Wirehold Metal Overfloor Duct

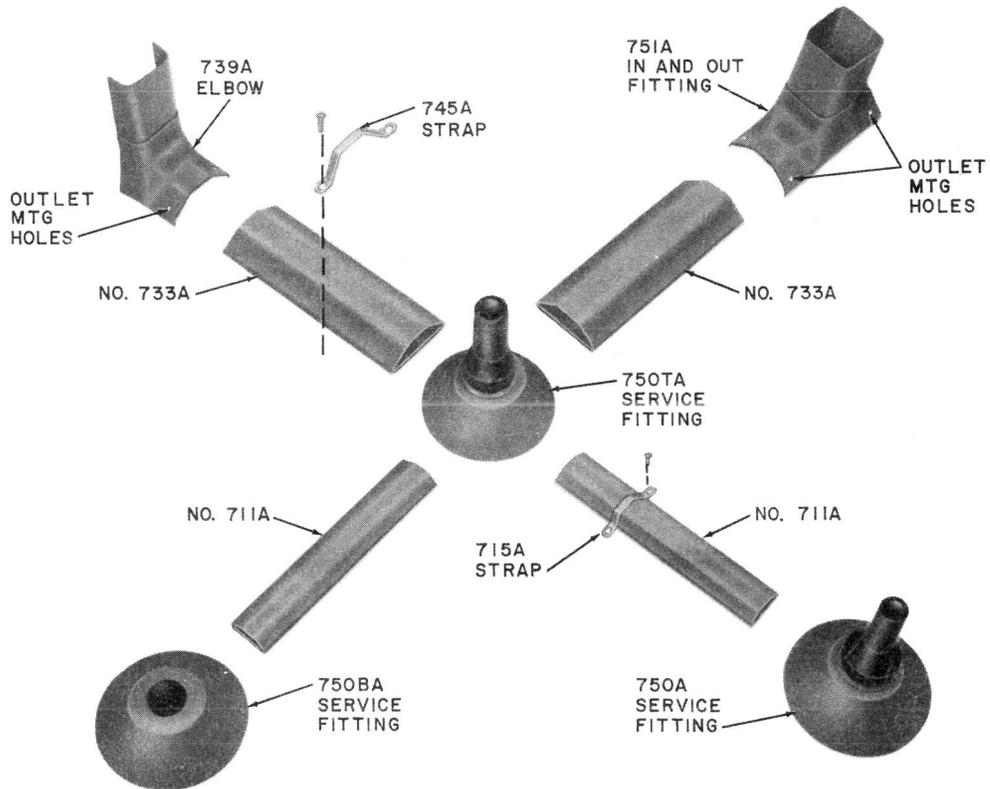


Fig. 2—Florduct Metal Overfloor Duct (Sheet 1 of 2)

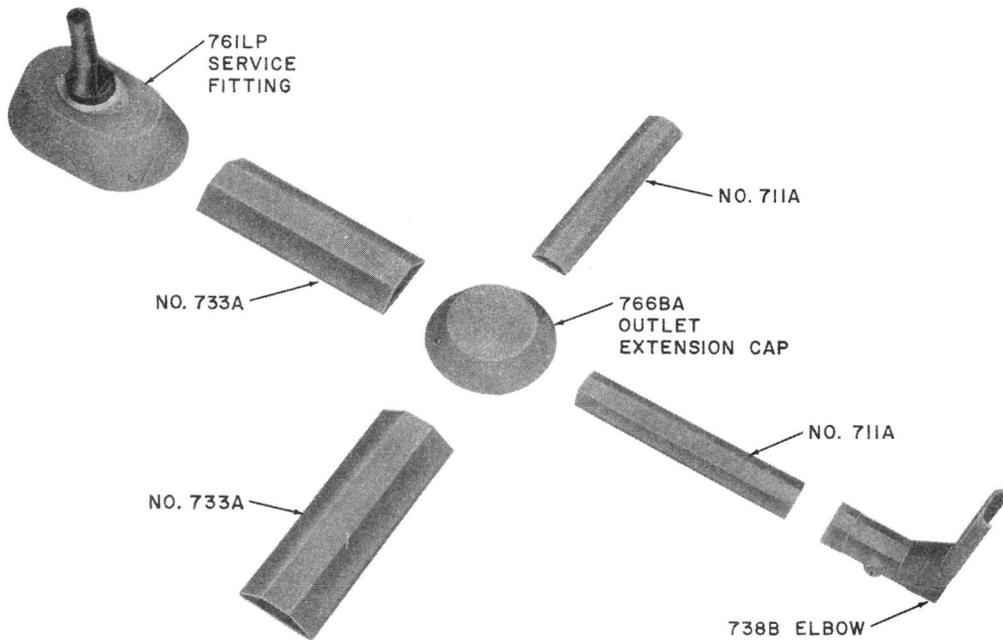


Fig. 2—Florduct Metal Overfloor Duct (Sheet 2 of 2)

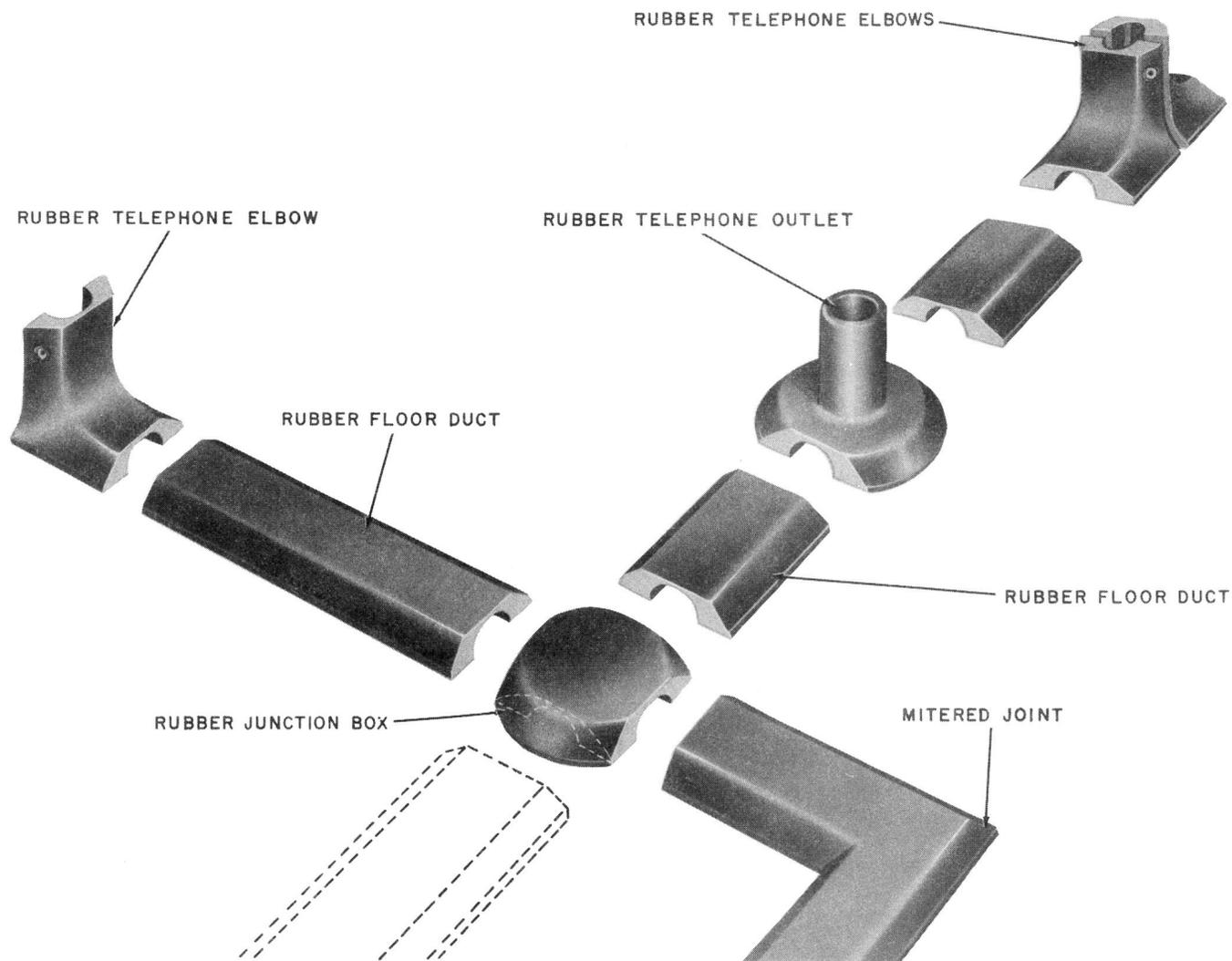


Fig. 3—B Rubber Overfloor Duct

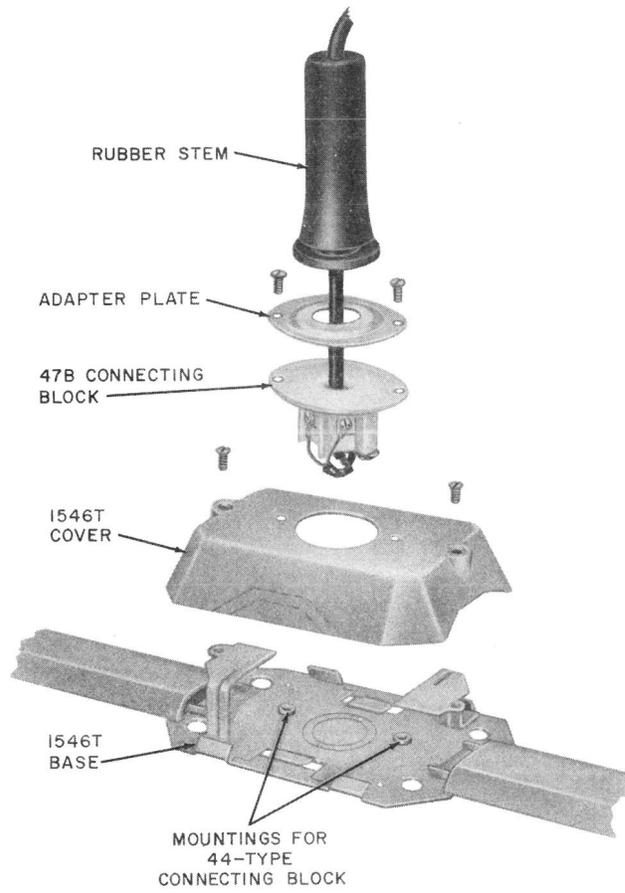


Fig. 4—1546T Telephone Outlet

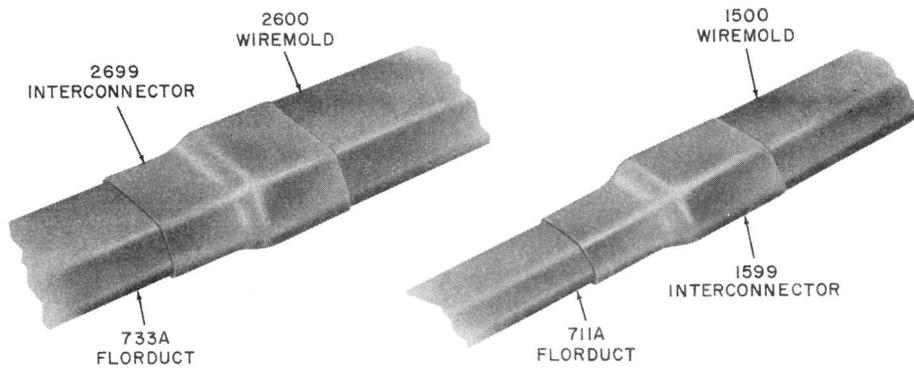


Fig. 5—1599 and 2699 Interconnectors

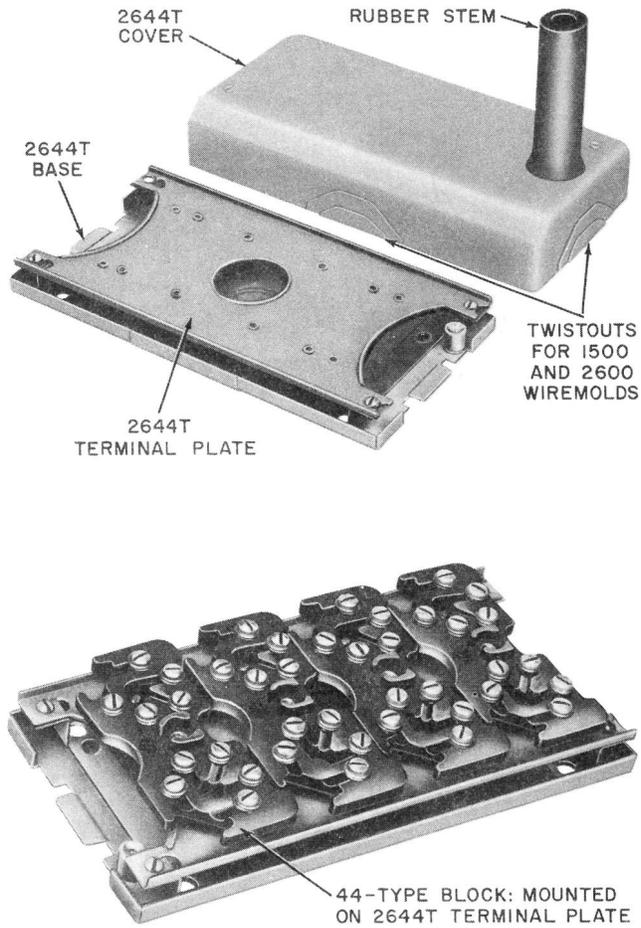


Fig. 6—2644T Service Fitting

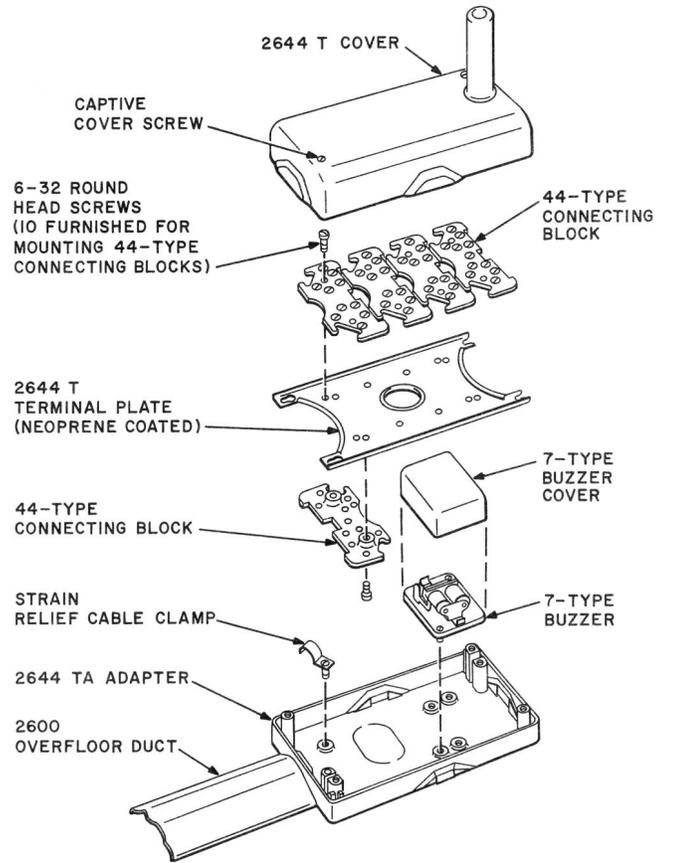


Fig. 7—2644T-2 Service Fitting

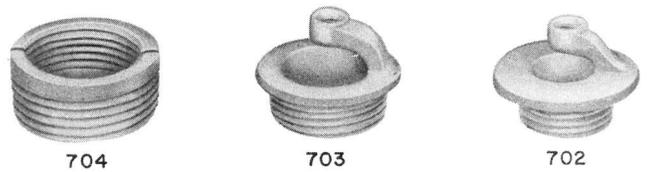


Fig. 8—702, 703, and 704 Adapters

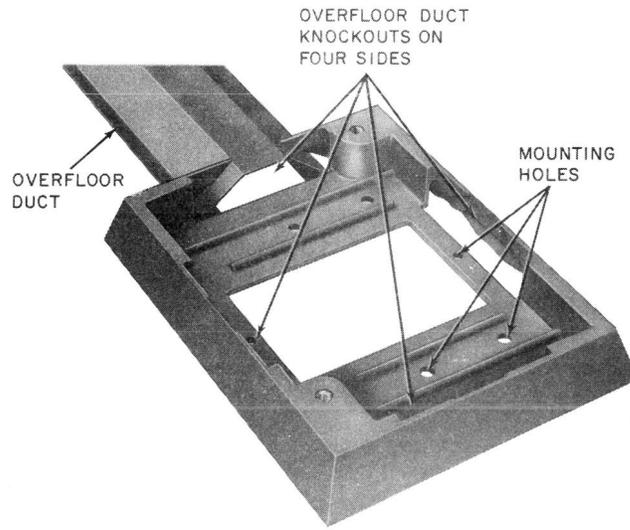


Fig. 9—152A Adapter

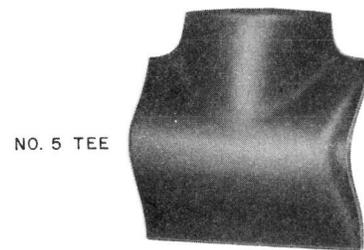
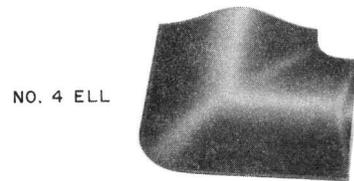


Fig. 10—Felxiduct Fittings

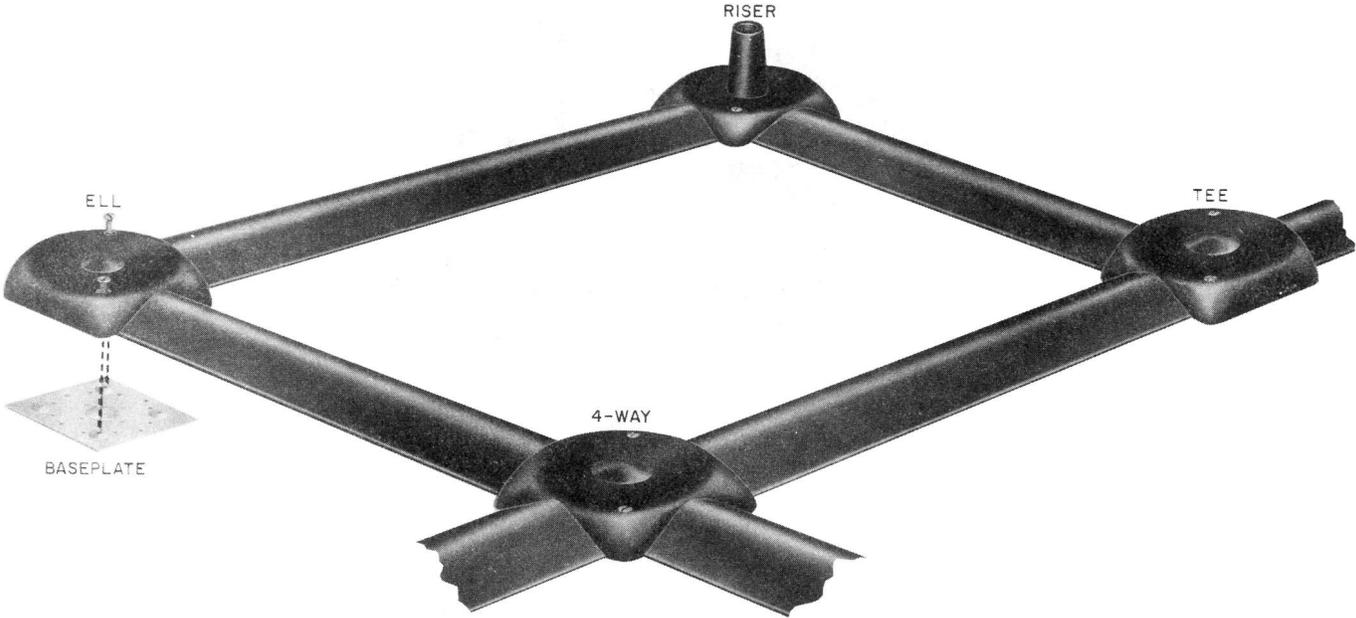


Fig. 11—No. 345 Combination Fitting

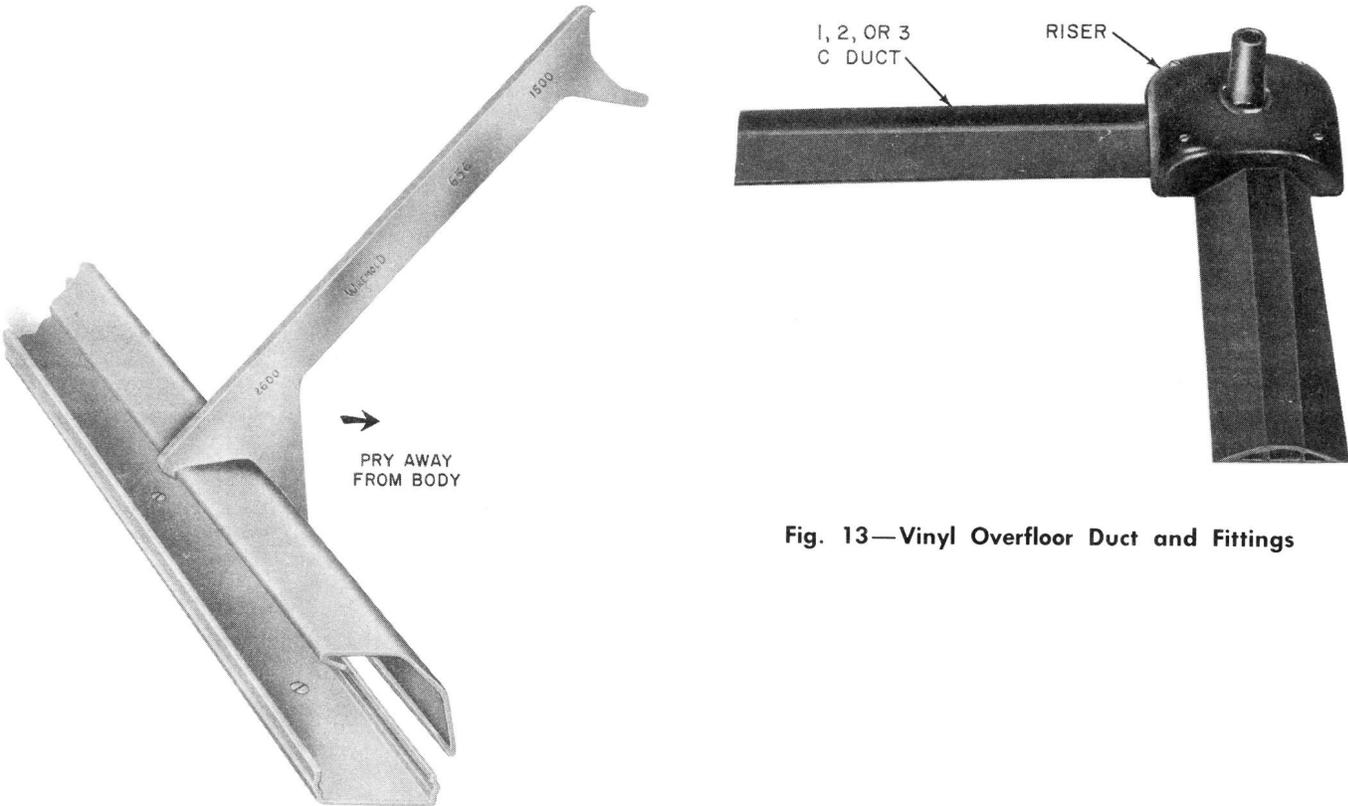


Fig. 13—Vinyl Overfloor Duct and Fittings

Fig. 12—Wiremould 656 Duct Cover Removal Tool

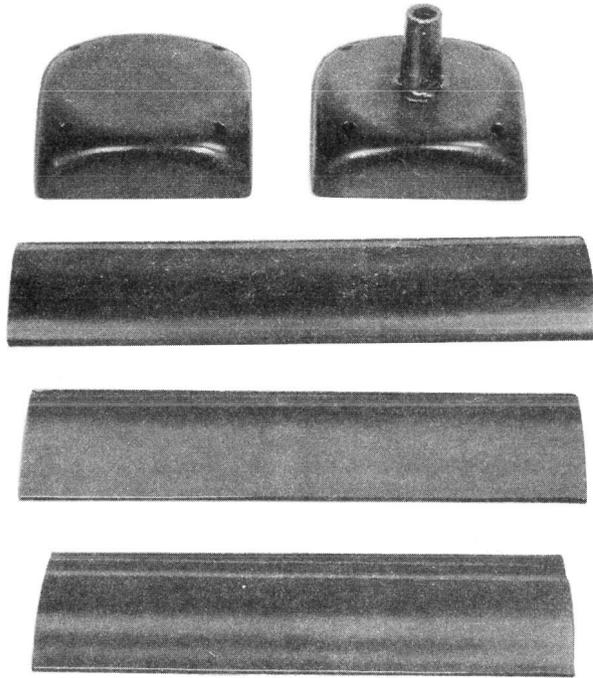


Fig. 14—Vinyl Overfloor Duct and Fittings

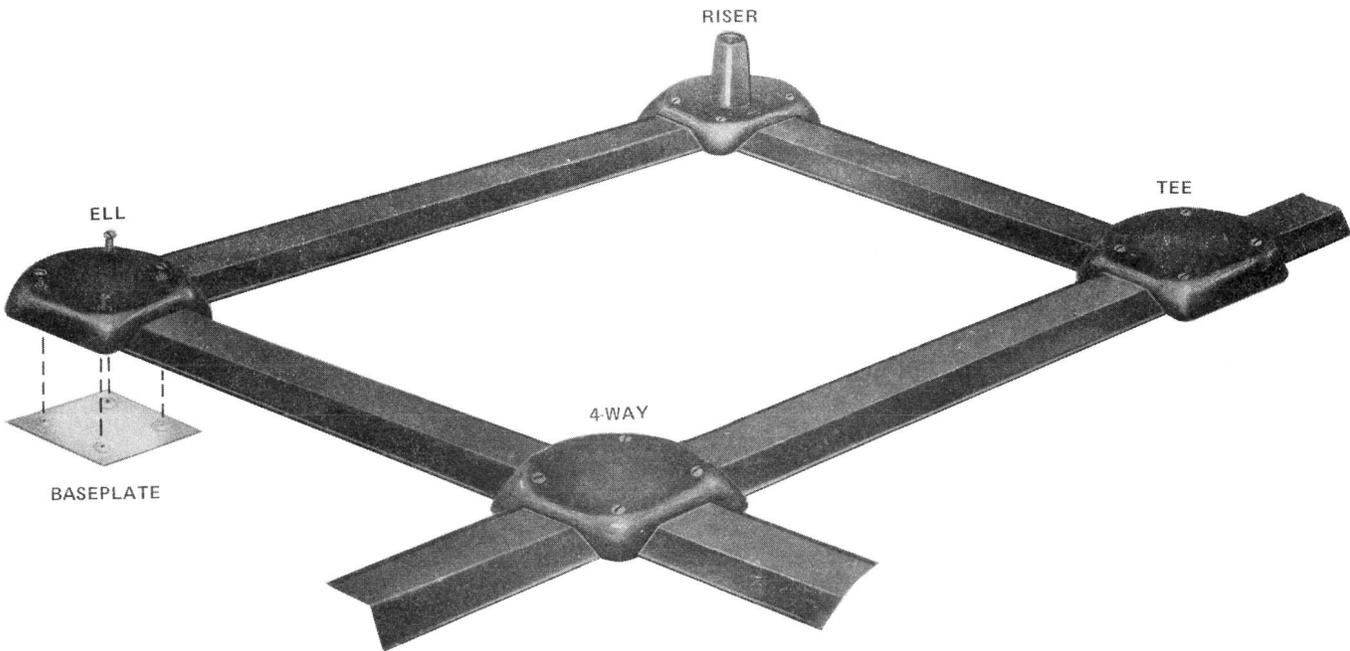


Fig. 15—Vinyl Overfloor Duct and Fittings

◆ TABLE A ◆

METAL DUCT SIZE AND CAPACITY
(See Note)

Wiremold	<p>NO. 1500</p>	<p>In 5- and 10-foot lengths Will hold:</p> <ol style="list-style-type: none"> 1. Six paired station wires 2. Four triple station wires 3. Eight D Station Wires (quad).
	<p>NO. 2600</p>	<p>In 5- and 10-foot lengths Will hold:</p> <ol style="list-style-type: none"> 1. Two 26-pair inside wiring cables 2. 25 D Station Wires (quad).
	<p>NO. 2800</p>	<p>In 5- and 10-foot lengths Will hold:</p> <ol style="list-style-type: none"> 1. One 100-pair inside wiring cable 2. 35 D Station Wires (quad).
Florduct	<p>NO. 711A</p>	<p>In 5-foot lengths Will hold:</p> <ol style="list-style-type: none"> 1. Five paired station wires 2. Four triple station wires 3. Five D Station Wires (quad).
	<p>NO. 733A</p>	<p>In 5-foot lengths Will hold:</p> <ol style="list-style-type: none"> 1. Two 26-pair inside wiring cables 2. 25 D Station Wires (quad).

Note: Table A gives capacity but not necessarily recommended usage.

→ TABLE B ←

ASSOCIATED FITTINGS FOR WIREMOLD

WIREMOLD PART NUMBER	TITLE	USED WITH DUCT			USE	FIG.
		1500	2600	2800		
152A	Adapter	•	•		Mounting for 66E-25 conn. block	9
1517A	Adapter	•			Making bends at wall or baseboards	1
1524A	Telephone Outlet	•			Inlet for telephone cord	1
1542A		•			Duct junction box	1
1546T		•	•		Connecting block mounting	4
1599	Interconnector	•			Joining No 1500 duct with No. 711A Florduct	5
2611	90 ° Flat Elbow		•		Making bends or turns	1
2617T	Telephone Elbow		•		Making bends at walls or baseboards	1
2642D	Junction Box	•	•		Duct Junction box	1
2642H	Telephone Outlet	•	•		Inlet for telephone cord	1
2644T	Service Fitting	•	•		Connector block mounting to provide wiring outlet	6
2644T-2		•	•	•		7
2644TA	Adapter	•	•		Base for 2644T-2 Fitting	7
2657T	Serving Fitting		•		Outlet for plug-ended tele- phone mounting cord	
2699	Interconnector		•		Joining No 2600 duct with No. 733A Florduct	5
2817T	Elbow			•	Same as 1517A	1
2842D	Junction Box			•	Same as 1542D	1

TABLE C

ASSOCIATED FITTINGS FOR FLORDUCT

FLORDUCT PART NUMBER	TITLE		USED WITH DUCT		USE	FIG.
			711A	733A		
152A	Adapter		•	•	Mounting for 66E-25 conn. block	9
702	Adapter	1/2-in	•		To adapt conduit stub-ups to overfloor duct fittings	8
703		3/4-in	•			
704		1 in	•			
715A	Strap		•		To secure duct where added holding strength is required	2
738B	Elbow Adapter Internal		•		For making bends at walls or baseboards	2
739A				•		
745A	Strap			•	Same as 715A strap	2
750A	Fitting Service		•	•	To provide junction for duct runs or outlets for wiring	2
750BA			•	•		
750TA			•	•		
751A	Fitting In and Out			•	To provide access to wiring where service fitting is not required	2
753A	Gasket		•	•	For watertight fittings	
761LP	Fitting Service		•	•	Connecting block mounting and inlet for telephone cord	2
765A	Cap Extension Outlet		•		To cap cable entrance to system	2
765BA			•	•		

→ TABLE D ←

CAPACITY OF RUBBER FLOOR DUCT
(SEE NOTE)

TYPE OF WIRE	NO OF PAIRS	C DUCT (AT-8693)			B RUBBER FLOOR DUCT (MD)	FLEXIDUCT (MD)		
		NO. 1	NO. 2	NO. 3		NO. 1	NO. 2	NO. 22
D Station Wire	Quad	5	10*	35*	10	5	10*	35*
Inside Wiring Cable	6	2	3	4	3	2	3	4
	12	1	2	3	2	1	2	3
	16	1	2	2	2	1	2	2
	21		1	2	1		1	2
	25		1	2	1		1	2
	50			1				1
	75			1				

Note: Table D gives duct capacity but not necessarily recommended usage, consideration must also be given to length of runs, etc.

* Consider using inside wiring cable.

→ TABLE E ←

VINYL OVERFLOOR DUCT SUBSTITUTION AND USAGE

	OVERFLOOR DUCTS AND FITTINGS				USAGE
	AT-8693		AT-7563X (MD)		
	C (VINYL)	FIG.	FLEXIDUCT	FIG.	
DUCT	NO. 1*	13	NO. 1	11	See Table D for Wire and Cable Capacities
	NO. 2*	13	NO. 2	11	
	NO. 3*	13	NO. 22		
FITTINGS	RISER	13	NO. 3 RISER	10	Outlet for System Wiring
	JUNCTION	13	NO. 4 ELL	10	Making turns in duct
			NO. 5 TEE	10	Junction for duct runs
			NO. 345 COMBINATION	11	As Elbow, Tee, Riser, or junction box
152A ADAPTER				9	Mounting for 66E-25 connecting block

* Supplied in 5-foot lengths with preapplied adhesive backing

→ TABLE F ←

FASTENERS FOR METAL OVERFLOOR DUCT

SURFACE	FASTENERS
Wood	3/4-inch No. 8 FH Bright Wood screws
Masonry or Cement	3/4-inch No. 8 FH Bright Wood screws in 6-8 by 3/4-inch screw anchors, or 3/16 by 7/8-inch Hammer Drive anchors*

* See section on Drive Tools Hand Type— for cover and flange on base at points marked.