

FOLKSWARMER INSTALLATION INSTRUCTIONS

Consist of PAGES 1 to 6

- PAGE 1 - List of Contents of Folkswarmer Kit
 - Tools and materials required
 PAGE 2 - Step by step installation instructions
 PAGE 3 - Step by step installation instructions
 PAGE 4 - Special hints for Do-It-Yourself
 - Operation of Folkswarmer for best results
 PAGE 5 - Sketches covering Standard Folkswarmer installation
 PAGE 6 - 2 sketches covering Custom Folkswarmer installation
 - 1 sketch showing Folkswarmer nozzle adjustment

List Of Contents Of ACS Folkswarmer Kit
 (Refer to Sketches)

<u>Item</u>	<u>Quantity</u>	
①	2	Forward sections of heater muffler, assembled (right and left hand)
②	2	Rear sections of heater muffler
③	2	Control cables
④	1	Cable bracket
⑤	2	Cable clips
⑥	2	Covers for bottom heater outlets at front
⑦	2	Self tapping screws 10 x 1/2"
⑧	2	Self tapping screws 10 x 3/4"
⑨	2	Nuts for control cables
⑩	2	Sealing strips

Tools & Materials Needed For FW Installation**S - STANDARD INSTALLATION**

Tools
 Hammer
 Screwdriver (medium)
 Universal pliers
 Hacksaw
 Tin snips or side cutters
 Pocket knife
 Adjustable wrench
 or
 open end wrenches 14mm; 9/16"

Materials
 Rubber cement
 or
 pliobond

C - CUSTOM INSTALLATION

1/2" Electric drill
 2" Holesaw
 1 1/2" Brush for undercoating

1 - 2 pints of undercoating

STEP BY STEP INSTALLATION INSTRUCTIONS

(The text describes the installation for one side, the other side is identical)

- S- Denotes STANDARD Installation (Approximately 1 hour)
 C- Denotes CUSTOM Installation providing "Short Circuit Air Flow"
 i. e. Air circulation between passenger and engine compartments
 (approximately 2 hours)

NOTE: For temperatures in excess of -20°F or if the car is used for short runs (less than 15 minutes) the Custom Installation is recommended.

Numbers and letters shown in parenthesis refer to items on various sketches. i. e. (4A) means Item (4) Sketch (A)

- S- 1 Remove front and rear seats and floor mats. (1960 models: leave mats in position and fold out of the way where required.)
- C- 1 Remove back seat rest, battery and rear quarter panels.
- S- 2 Install control cable bracket (4A) under existing bolt using only springwasher (1960 models: Cut small piece of tunnel lining to expose forward mounting screw of gearshift lever).
- S- 3 Thread cable (3A) through bracket (4A) add nut (9A) behind bracket and then feed underneath tunnel lining which has to be lifted off as required (Sketch A). Tighten speednut (9A) lightly with 9/16" wrench.
- S- 4 Seal existing heat outlets at the floor with sheet (6B). Remove sheetmetal nails first before lifting carpet. After sheet (6B) fits heating channel contour, apply rubber cement to both surfaces. Insert sheet over outlet and tack with previously removed nails to assure permanent seal.
- S- 5 Remove top half of existing heater muffler located underneath rear seat. (On 1960 models: remove wrapping of heater muffler first) Do not break the holding tabs but bend them level with the flange of the bottom half.
- C- 2 With 2" dia. holesaw, cut 3 holes into lower part of sheetmetal panel beside heater muffler (Sketch I). Select correct dimension according to model.
- C- 3 Undercoat the inside of the quarter panel thoroughly including back of the panel where 2" holes have been cut. The undercoat should then seal a number of drainholes (on later models only) which are no longer required (Sketch K).
- C- 4 Cut into tar board lining of engine compartment all the way to the fire wall as shown on Sketch 1. Remove upper part.
- C- 5 Remove sound proofing cushion from position 'I' (Sketch I).
- C- 6 Bend sheetmetal divider backwards to clear air passage. (Sketch I)
- C- 7 Glue sound proofing cushion into new position 'II'. Visual check for uniform and unobstructed air passage may be made with rear quarter panels still removed (Sketch I).
- C- 8 For best results, insulate as much of this air passage as possible with undercoating.
- C- 9 Replace rear quarter panels and back rest.

Step By Step Installation Instructions (continued)

- S- 6 Cut filter to allow for valve operation (Sketch C).
- S- 7 Assemble FW shell (Sketch D) according to the size of existing heater muffler but do not tighten the screws. Longer screw (8D) holds clip on valve shaft side. FW valve must clear air passage completely in respective stop positions.
- S- 8 Clean bottom flange from oil and dust. Remove paper backing from sealing strip (10E & F) and apply to bottom flange, overlapping on front corners by 1/8" as shown.
- S- 9 Seal drain hole in lower muffler half with masking tape from both sides or use leftover sealing strip (Sketch E).
- S- 10 Insert filter (Sketch F & G) at the very rear of lower half. Bend rear tabs at rear section of FW at 45° angle (Sketch D). Hook tabs over bottom shell then pull forward and press down to make good contact with bottom flange. Check free valve operation, then bend front tabs over and finish bending rear tabs. The sealing strip should now be compressed between flanges. If necessary, bend flanges into place with a pair of pliers in order to prevent air losses.
- S- 11 With FW knob pushed in, fasten cable (3D) under clip (5D) - bend wire into valve shaft in its closed position (Sketch D & H). Cut off surplus core wire. Tighten other sheetmetal screw. For Custom models that have no continuous tunnel lining, we suggest to fasten the control cables to the tunnel with 2 additional clips (5D) and sheetmetal screws (7D). These parts may be obtained from your dealer.
- S- 12 Check free operation of valve - use drop of oil.
- C- 10 Replace battery but make sure that there is at least 1/8" gap between the FW and the battery case.
- S- 13 Replace floor mats and seats.
- S- 14 Adjust FW nozzle as per Sketch J. Properly installed, the FW will produce an air flow at idling speed up to the front of the car floor. Check with smoke.

NOTE:

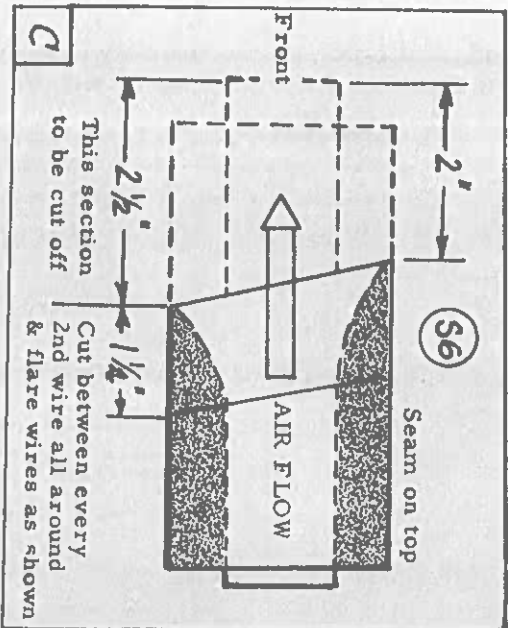
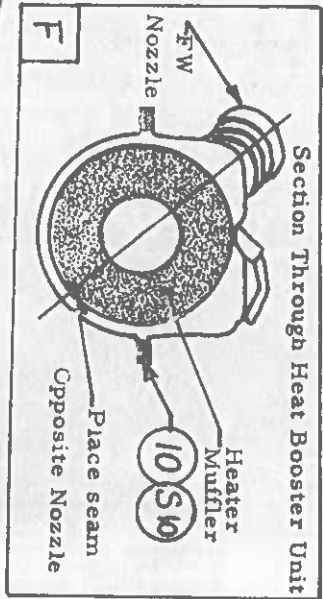
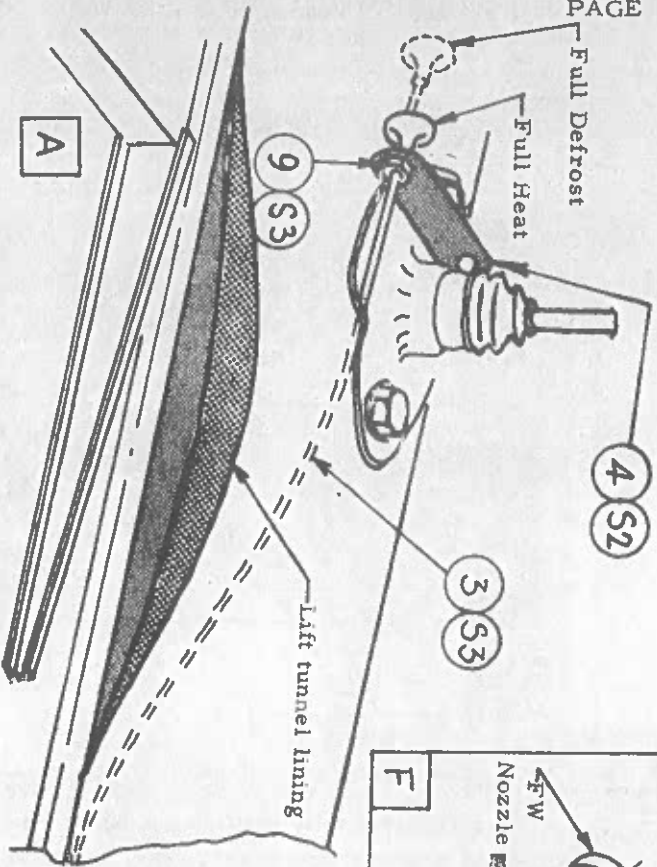
On 1960 models, we suggest to keep the space between rear seat and floor open during the heating season by leaving off plastic panels rather than cutting them. These panels may be used again during the summer.

SPECIAL HINTS AND EXPLANATIONS FOR 'DO-IT-YOURSELF'

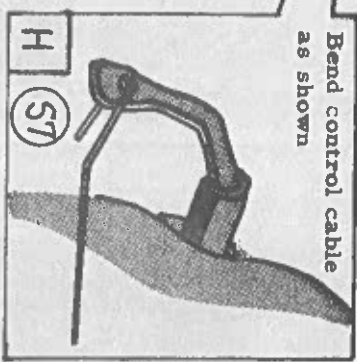
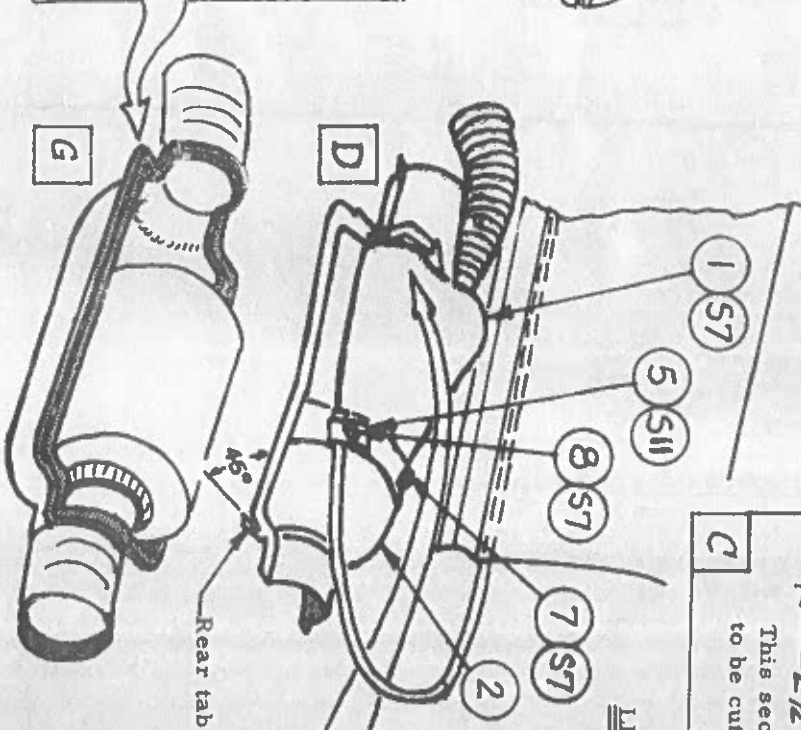
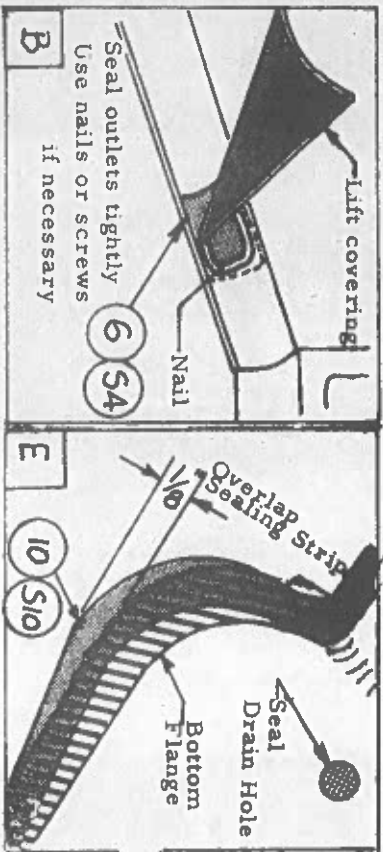
- C- 1 Rear quarter panels are easily removed by inserting a medium sized screw driver along the edge and prying off holding clip.
- S- 2 Install bracket so that ACS imprint faces front of car.
- S- 3 Prepare a path for the casing by inserting a screw driver on either side of gear shift lever immediately underneath lining. Rotate back and forth while advancing to prevent piercing of lining. Start lifting of tunnel lining just immediately aft of the seat rails. Pull core wire far enough back so that it does not protrude from casing then feed casing through bracket and underneath lining.
- S- 4 To obtain similar shape of the sheet as compared to the heating channel, bend sheet over front bumper bow. Check fit.
- S- 5 This is easiest done by bending the 2 inside tabs away, then insert screw driver between halves and pry open. Make sure tabs are finally well in line with bottom flange.
- C- 6 Use the pipe of approximately 1" Dia. as a lever against the fender well in line with bottom flange.
- S- 7 Tighten sheetmetal screws first but slacken off until FW has been mounted in place.
- C- 7 When connecting the battery, first connect the insulated cable to Positive then fasten the ground strap to the negative battery post.

HOW TO USE THE FOLKSWARMER FOR BEST RESULTS

- (A) Starting up with cold engine:
 - 1. Turn heater knob on. (It is essential that both heater flaps on the engine are tightly closed.)
 - 2. Push both Folkswarmer control knobs in all the way.
 - 3. Start engine. Do not race it.
 - 4. Allow sufficient time for oil circulation before driving off.
 - 5. Keep your engine revolutions up. Lugging causes slower warm-up.
 - 6. If necessary, adjust gradually for the required amount of defrosting by pulling one or both of the Folkswarmer controls out.
- (B) If your car is not equipped with insulated heater pipes (from engine to body) and heater junction boxes, we recommend this to be done for added efficiency.
- (C) For added comfort, you may use floormats on top of the standard VW rubbermats or insulate with felt, ten-test, etc. underneath the rubbermats.
- (D) In areas of extremely low temperatures it is recommended to undercoat the rear bonnet for insulating purposes in connection with the Custom installation.



STANDARD FOLKSWARMER INSTALLATION
One side shown - Other side identical



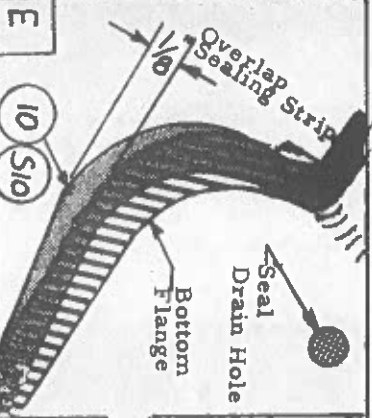
LEGEND

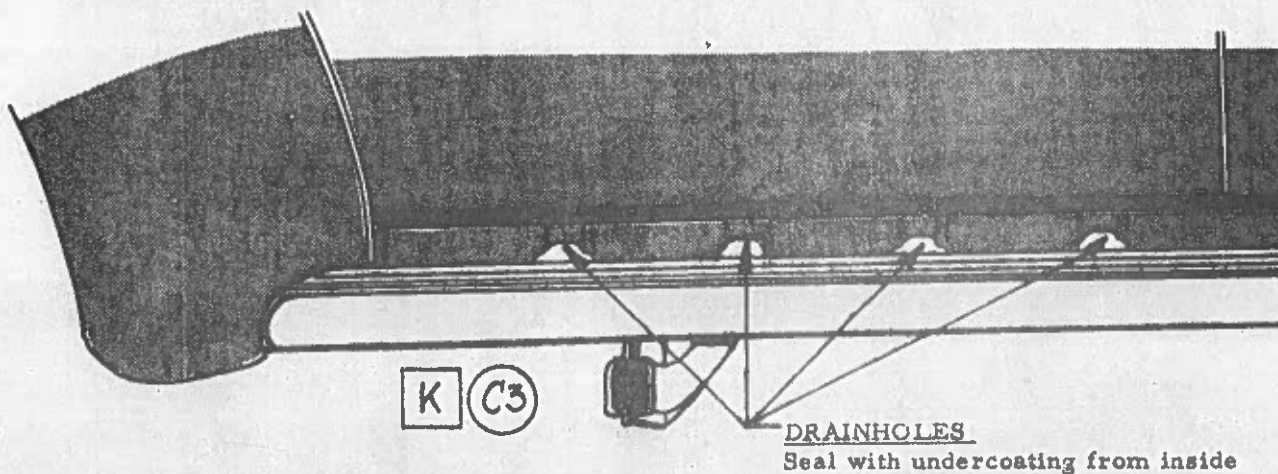
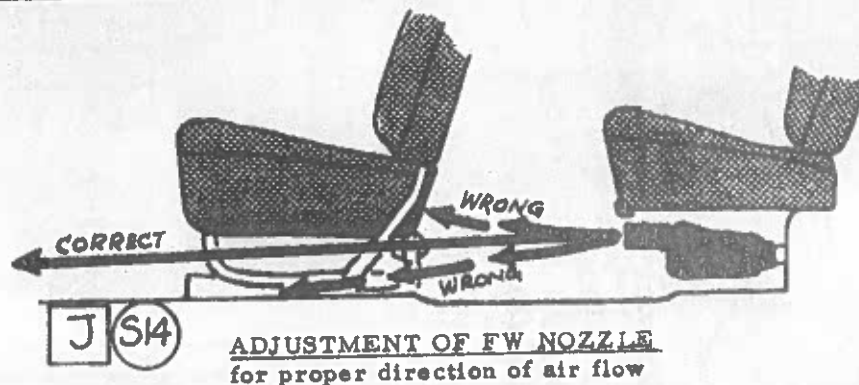
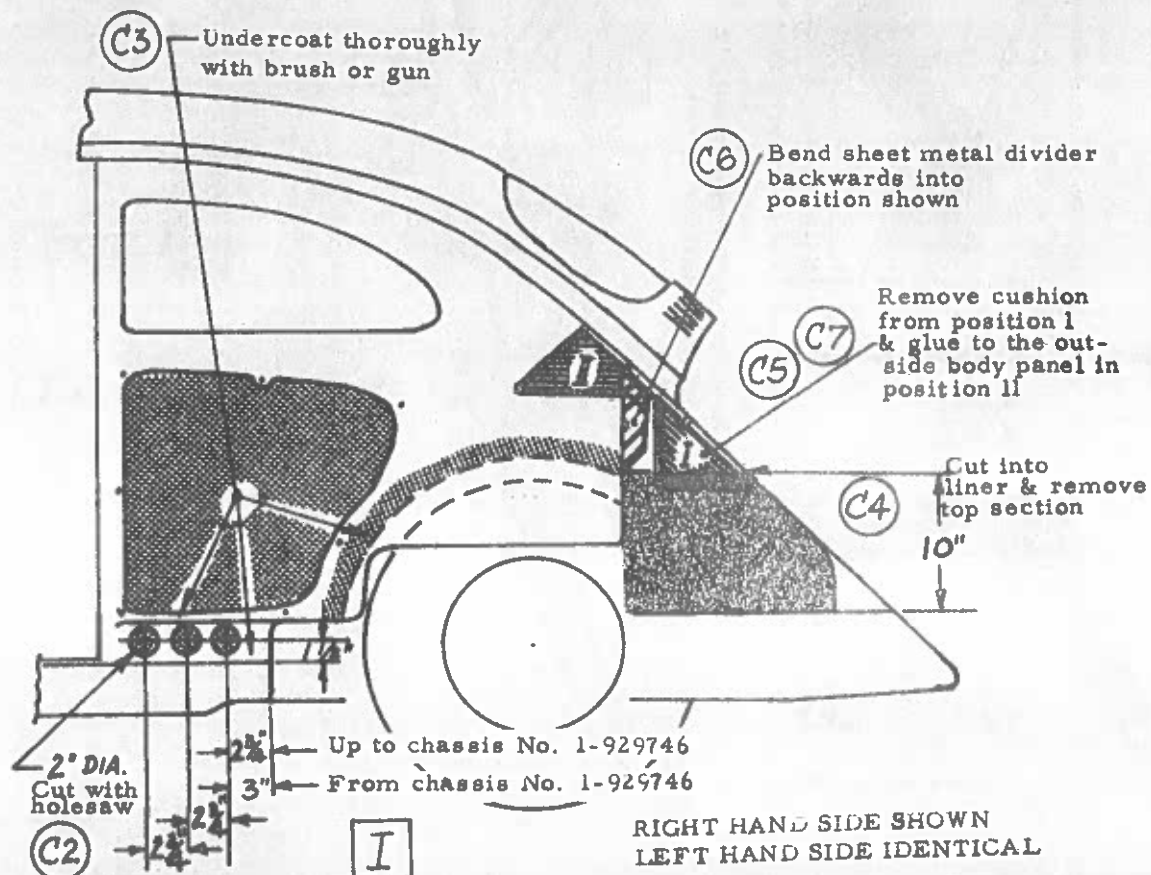
- ⑥ Items of FW Kit
- ⑤④ Installation Step

B Sketch

Bend control cable as shown

H ⑤⑦

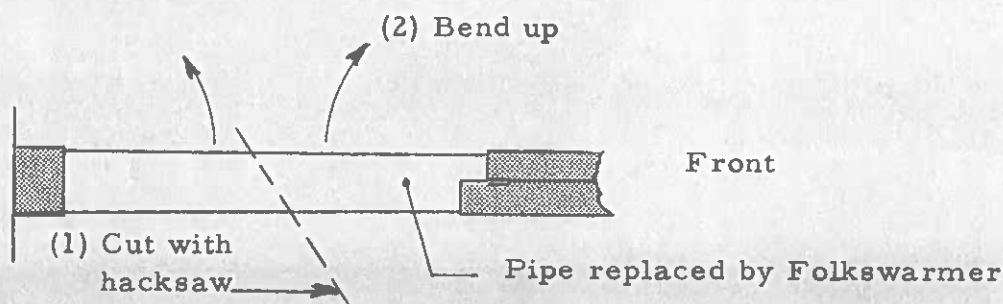




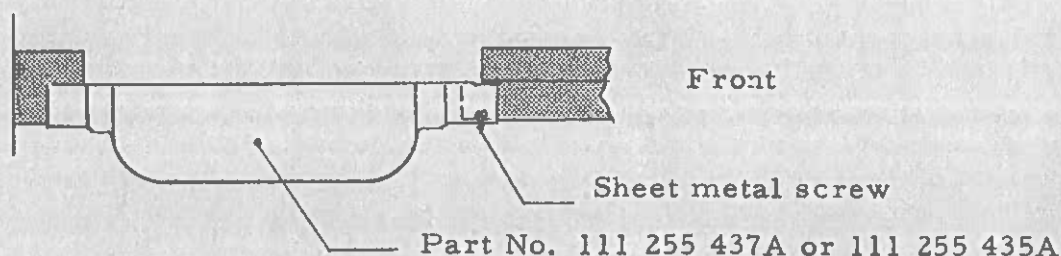
RE: FOLKSWARMER HEAT BOOSTERSModified Installation in Late 1960 Volkswagen Cars

Volkswagen cars from May 1960 on (Chassis No. 3-060711) have relocated heater mufflers. When installing Folkswarmers on these cars, adhere to the following instructions.

1. With the use of the Folkswarmer, the heating pipe underneath the rear seat serves no further purpose and is therefore removed so that the heatbooster may be properly installed. Cut pipe in the centre at an angle (see sketch); then bend pipe pieces up to break away at the welds.



2. In place of the removed pipe, fasten a VW muffler half No. 111 255 437A with a sheet metal screw 6 X 3/8" as shown on sketch below. We recommend obtaining the two halves in question from a VW dealer. However, as a convenience to our customers, these parts may be obtained through us, complete with screws, under the Set Number "FW SUP 61".



3. Install the Folkswarmer according to the installation instructions.

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