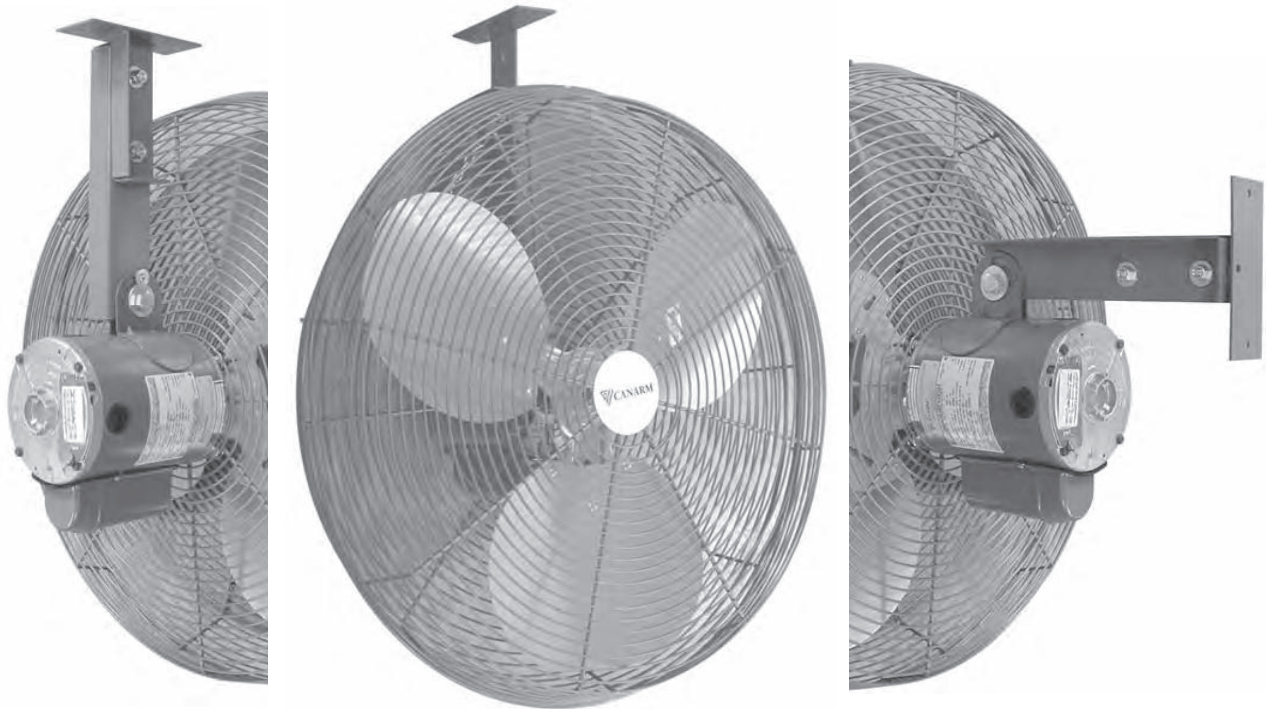


# CA-AG Series Instruction Manual



## WARRANTY

CANARM Ltd. warrants every new fan to be free of defects in material and workmanship, to the extent that, within a period of one year from the date of purchase CANARM Ltd. shall either repair or replace at CANARM's option, any unit or part thereof, returned freight prepaid, and found to be defective.

This warranty does not include any labour or transportation costs incidental to the removal and reinstallation of the unit at the user's premises.

Components repaired or replaced are warranted through the remainder of the original warranty period only.

This warranty applies to the original purchaser-user only; it is null and void in case of alteration, accident, abuse, neglect, and operation not in accordance with instructions.

**NOTICE:** No warranty claims will be honored by CANARM Ltd. unless prior authorization is obtained.

Installation or Product problems? Do not return to store of purchase.  
Contact Canarm Service at 1-800-265-1833 (CANADA) 1-800-267-4427 (U.S.A.)  
1-800-567-2513 (EN FRANCAIS) Monday to Friday 8:00 - 5:00pm e.s.t.

# CA-AG Series Instruction Manual

READ AND SAVE THESE INSTRUCTIONS

Model	Size	Speed	HP	RPM	Volts	Amps
CA20AG-FVD1	20"	Variable	1/3	1625	115/230	4.2/2.1
CA24AG-GV11	24"	Variable	1/2	1100	115/230	6.4/3.2
CA30AG-GV11	30"	Variable	1/2	1100	115/230	6.4/3.2

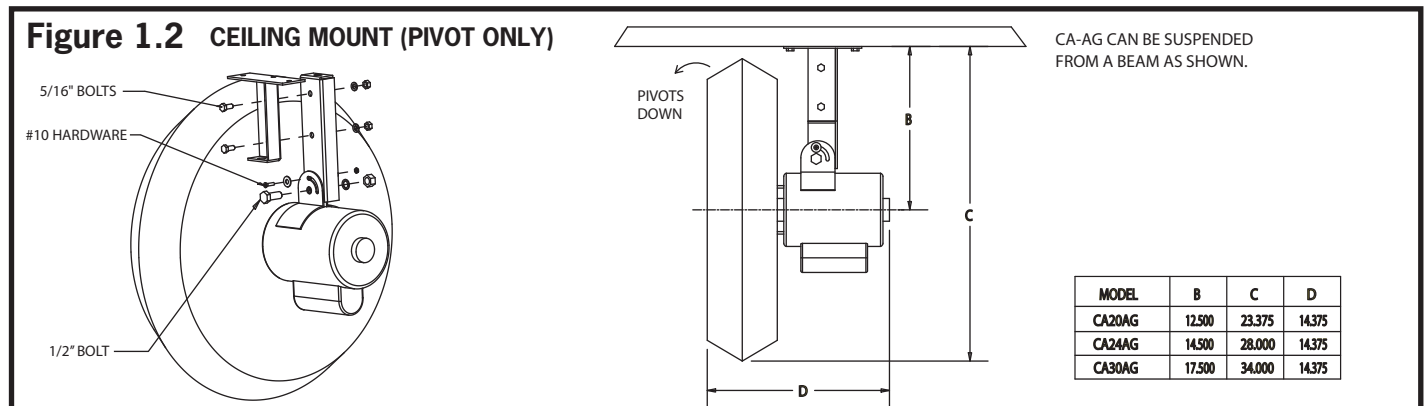
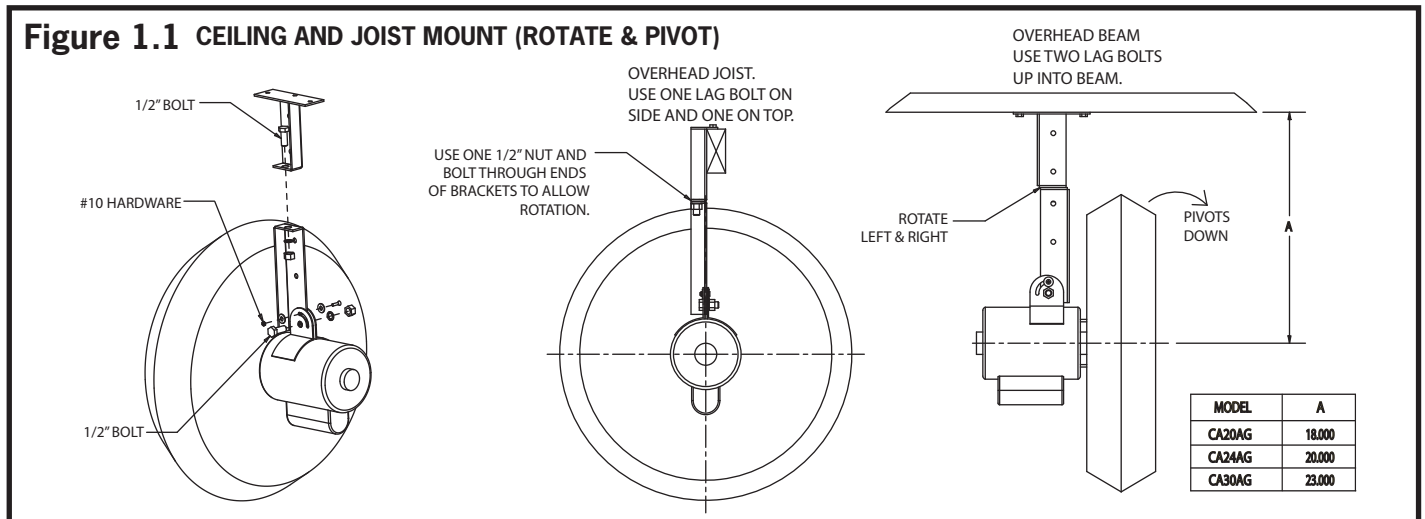
**Note:** Amps may increase when speed is reduced depending on control used. Therefore leave a safety factor of 25% when determining controller load. i.e.: 1.7 amps rated x 1.25 = 2.1 amps for sizing control.

These compact, high volume, corrosion resistant circulating fans are designed for use in livestock buildings. They have been proven to provide healthier animals and greater yields. These benefits lead to a short payback period of one to two years for the fans. The fans circulate fresh air, relieve heat stress, eliminate dead air pockets, and help in controlling flies. The fans also provide more comfortable working conditions and help control moisture.

## INSTALLATION

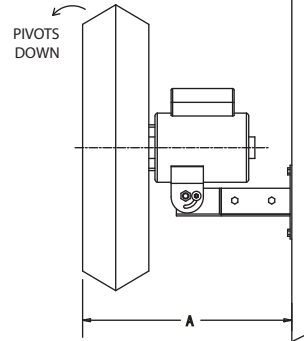
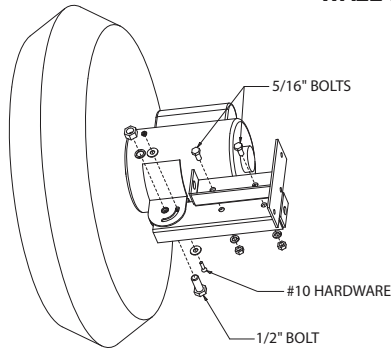
The fans are provided with an adjustable 3-way mount. They can be mounted to a wall, ceiling, or ceiling joist as shown in the diagrams. The fan can pivot down and swivel side to side for accurate airstream control.

**WARNING: Secure safety chain provided from ceiling to guard when using any type of ceiling mount.** (Chain can also be used to hold pivot angle when pivoting fan down. (See **Figures 1.1, 1.2 & 1.3**).



**Figure 1.3**

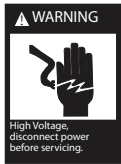
**WALL MOUNT (PIVOT ONLY)**



WHEN MOUNTING FAN TO WALL USE BOTH NUTS AND BOLTS ON THE EXTENSION ARM AND TWO LAG BOLTS TO SECURE TO WALL.

MODEL	A
CA20AG	17.375
CA24AG	19.375
CA30AG	22.375

**ELECTRICAL CONNECTIONS**



**WARNING: BE SURE POWER IS OFF AT THE ELECTRICAL PANEL BEFORE WIRING.**

**WARNING: ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A QUALIFIED ELECTRICIAN.**

All motors are pre-wired at 240v in our factory. Rewire motor as per motor nameplate if running fan at 120v. Please see the motor nameplate for wiring diagram. Make electrical connections in motor connection box as per the motor nameplate. Follow chart #1 for wire sizes.

**CHART# 1**

Table A - Minimum Wire Sizes for Three-Phase Motors									
Motor HP	25 to 50 Feet			100 Feet			150 to 200 Feet		
	200V	230V	460V	200V	230V	460V	200V	230V	460V
1/8	14(18)*	14(18)*	14(18)*	14(18)*	14(18)*	14(18)*	14(16)*	14(16)*	14(18)*
1/6	14(18)*	14(18)*	14(18)*	14(18)*	14(18)*	14(18)*	14	14(16)*	14(18)*
1/4	14(18)*	14(18)*	14(18)*	14(16)*	14(18)*	14(18)*	14	14	14(18)*
1/3	14(18)*	14(18)*	14(18)*	14(16)*	14(16)*	14(18)*	12	14	14(18)*
1/2	14(16)*	14(18)*	14(18)*	12	14(16)*	14(18)*	10	12	14(18)*
3/4	14(16)*	14(16)*	14(18)*	12	14	14(18)*	10	10	14(16)*
1	14	14(16)*	14(18)*	12	12	14(18)*	8	10	14(16)*
1-1/2	12	14	14(18)*	10	10	14(16)*	6	8	14
2	12	12	14(18)*	8	10	14(16)*	6	6	12
3	10	12	14(18)*	6	8	14	4	6	12

Table B - Minimum Wire Sizes for Single-Phase Motors									
Motor HP	25 to 50 Feet			100 Feet			150 to 200 Feet		
	200V	230V	460V	200V	230V	460V	200V	230V	460V
1/8	14(18)*	14(18)*	14	14(18)*	12	14(18)*	10	8	14
1/6	14(16)*	14(18)*	12	14(18)*	10	14(16)*	6	6	12
1/4	14	14(18)*	10	14(16)*	8	14	6	4	10
1/3	14	14(18)*	10	14(16)*	8	14	6	4	10
1/2	12	14(18)*	8	14	6	12	4	3	8
3/4	10	14(16)*	6	12	4	10	2	1	6
1	10	14(16)*	6	12	4	10	2	1	6
1-1/2	8	14	6	12	3	8	1	1/0	6
2	8	14	4	10	2	8	1/0	2/0	4
3	6	12	3	8	1/0	6	2/0	4/0	3

**Note:**

- NEC Article 310-5 - \* Minimum conductor size for general wiring at 115-440VAC is number 14AWG.
- Above wire sizes based on approximate 5% voltage drop during starting; copper conductors; and 75°C type THHW, THW, THWN, RH, RHW insulation etc. For aluminum wire, increase two wire size steps minimum. See NEC Article 310 for ampacities of aluminum conductors.
- Type S, SO, SJ, SJO, etc flexible cable wire sizes. See NEC Article 400 for ampacity.

**FAN CONTROL:**

The fans can be controlled with manual or automatic thermostatic controls. These variable speed fans can be operated on low in milder weather to re-circulate warm air down from the ceiling, circulate fresh air, help remove moisture, remove dead air pockets and move unwanted gases to the exhaust. In hot weather operate the fans on high to relieve heat stress and help control flies. For best cooling effect, direct the air stream across the animals head and shoulders.

**CAUTION:** If using a variable speed control, the minimum speed setting on the control should be set to half of the full load voltage. (i.e. If fan is wired at 230V, the minimum speed setting should be set to run the fan at 115V).

**CAUTION:** When operating the fans in cooler weather be careful not to direct the airstream on to the animals. Cold drafts can cause health problems.

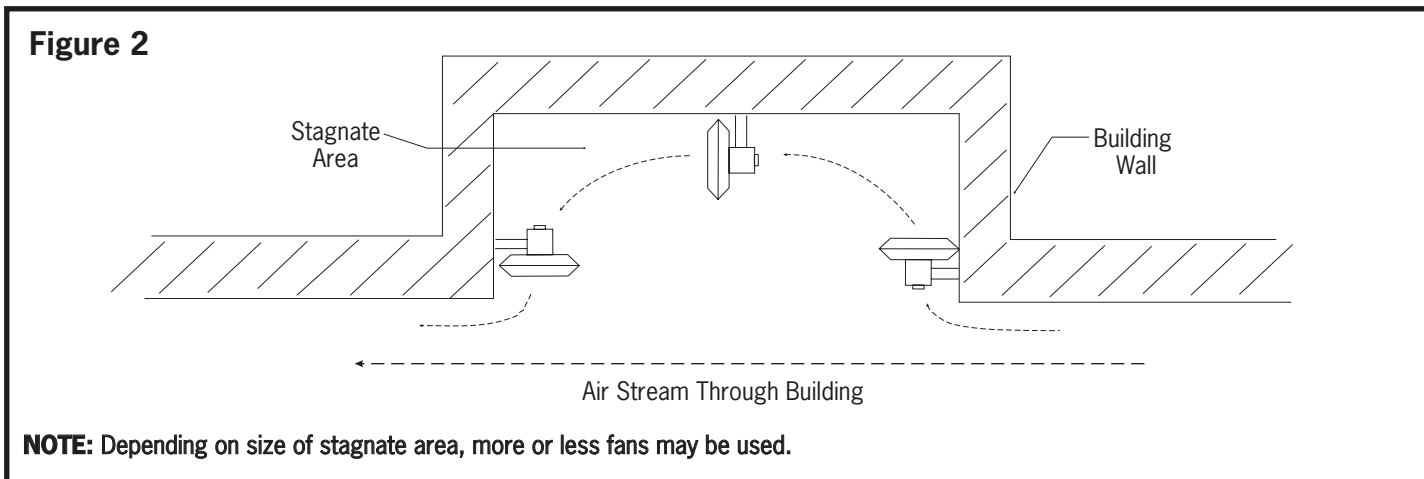
**FAN LOCATION:**

These fans should be positioned to move air in stagnate locations, or to generate airflow over livestock to keep them cool, and keep flies away. Some typical fan layout options are listed below.

**1. ELIMINATING STAGNATE LOCATIONS IN FORCED AIR VENTILATED BUILDINGS**

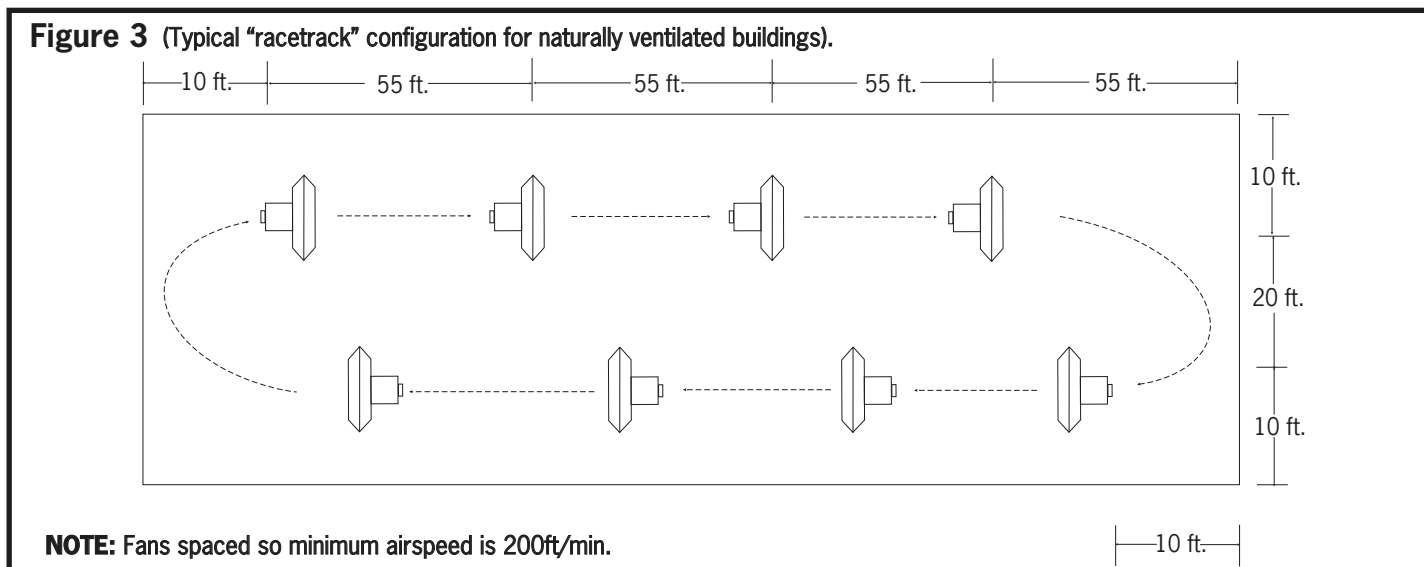
To move air in stagnate locations, position fan or fans to force air through. See **Figure 2**.

**Example of Moving Air in Stagnate Area**



**2. GENERATING AIR FLOW IN NATURALLY VENTILATED BUILDINGS.**

To generate airflow over livestock, fans should be spaced according to velocity diagrams below. A general rule of thumb is to space them at a distance that will maintain a flow of 200ft/min. For example, CA24AG-GVII should be spaced out approximately every 55ft. (See **Figure 3** for typical layout, see velocity mapping diagrams on next page.)



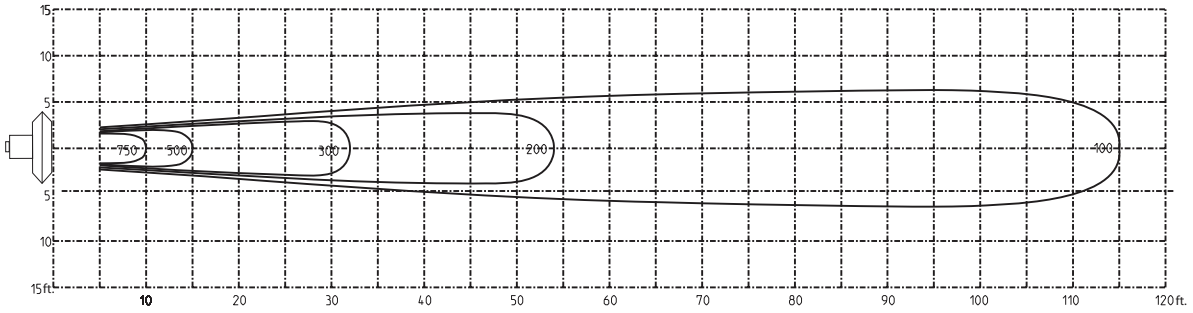
**MAINTENANCE:**



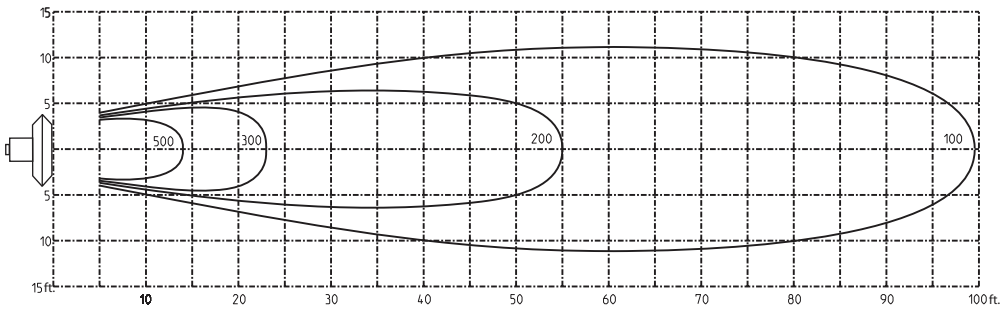
**WARNING: MOTORS ARE EQUIPPED WITH AUTOMATIC OVERLOAD PROTECTION AND MAY RESTART WITHOUT WARNING. ALWAYS DISCONNECT POWER BEFORE ATTEMPTING TO SERVICE.**

These fans are virtually maintenance free. Motor, blade and especially the guard, should be kept clean of any dirt build up to prevent premature motor failure and to achieve proper performance.

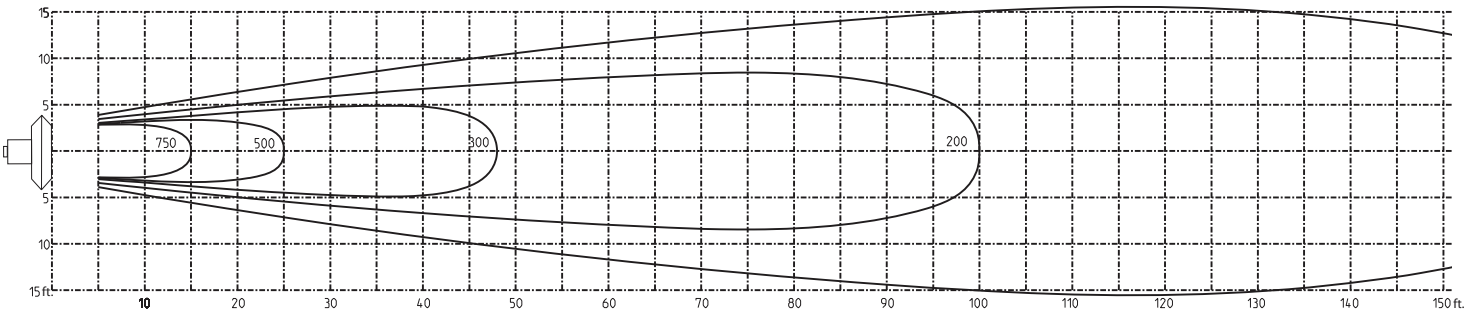
## VELOCITY MAPPING DIAGRAMS



**CA20AG-FVD1**  
(Recommended for long narrow areas)



**CA24AG-GV11**  
(Recommended for wider areas)



**CA30AG-GV11**  
(Recommended for wide, long areas)



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