

**CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT**  
**PURCHASE SPECIFICATION**  
**FOR**  
**FAN, 115V, 1PH, PROPELLER VENTILATION, USE IN TRANSFORMER**  
**VAULTS**

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL PROCESS SUPV. /MATERIALS SUPV.
02/17/84	Kiela Moore	Issuance	
08/24/11	Dennis Patrick	Revision	

REASON FOR REVISION	AFFECTED PARAGRAPHS
08/24/11: Revision	All

This specification, until revised or rescinded, shall apply to each future purchase and contract for the commodity described herein.  
 Retain for future reference.

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PURCHASE SPECIFICATION FOR  
FAN, 115V, 1PH, PROPELLER VENTILATION, USE IN TRANSFORMER VAULTS**

**1.0 SCOPE AND CLASSIFICATION**

**1.1 Scope**

**1.1.1** The City of Austin Electric Utility Department, hereinafter referred to as Austin Energy (AE), requires a qualified Vendor, to provide propeller type ventilation fans for use in transformer vaults.

**1.1.2** No deviation from these specifications on the part of the Vendor shall be allowed. Any item supplied under these specifications, which is not in complete compliance with these specifications, will not be accepted and will be returned to the Manufacturer.

**1.2 Classification**

**1.2.1** Fan motors shall be 115V, single phase, 60 Hertz, as specified with each order.

**1.2.2** Fans shall be self-contained, heavy-duty units capable of continuous operation.

**1.2.3** Fans shall comply with the minimum standards shown in 5.1 CHART A.

**2.0 APPLICABLE SPECIFICATIONS**

**2.1** All fans supplied shall have ratings, which are based on tests in accordance with AMA and AMCA standards.

**3.0 FUNCTIONAL REQUIREMENTS**

**3.1** The maximum sound level of the fan at its normal operating RPM shall be in accordance with AMA and AMCA standards. The maximum allowable sound levels are outlined in CHART B, Sec. 5.2.

**3.2** Minimum standards and dimensions. (See 5.1 CHART A)

**3.3 Construction**

Fan panel	16ga
Fan Structural supports	12ga
Motor Bracket	12ga
Blades	16ga
Blade Spider	12ga
Housing	20ga
Housing Wall Flange	14ga

**4.0 PHYSICAL REQUIREMENTS**

**4.1** The fan motors shall be of single-phase design. They shall have a totally enclosed case and permanently sealed bearings (TEFC). The 12" and 16" fans have a 1/3 H.P. with a 48 Frame motor. The 20" fan is a 3/4 H.P. with a 56 Frame motor. Unit shall include a 6ft long, factory wired power cord for 115v application. Motor shall be factory wired for 115v. See 5.1 CHART A

**4.2** The fan blades shall be of efficient, low drag design, which minimizes noise. Blades shall be precisely balanced to ensure vibrationless operation of the fan. All fans shall be three (3) bladed props. See 5.2 CHART B

- 4.3 The fan housing and orifice shall be made of steel with a minimum of 20 gauge and fan blades with a minimum metal gauge of 16. See 5.1 CHART A
- 4.4 All fan steel components shall be painted a minimum three mils thick, with a thermosetting powder epoxy coating.
- 4.5 Housing and heavy duty wall flange shall be fabricated from G90 mil galvanized steel with a minimum of three mils thick powder coat finish. Mounting holes in flange shall be 9/16 inch holes to accommodate ½ inch size bolts.
- 4.6 All motors shall have built-in motor protection with motor side guard and be totally enclosed air over (TEAO). See 5.1 CHART A
- 4.7 Fans must have a low enough sound rating to be licensed to bear the AMCA Certified Ratings Seal for Air and Sound. See 5.2 CHART B
- 4.8 Fan motors shall be capable of both exhaust and supply wind direction, whichever is needed.
- 4.9 There shall be a factory wired disconnect switch on all fans and factory wired thermostat. Thermostat shall be factory set to turn on at 90° F and turn off at 80° F.

**5.0 CHARTS A AND B**

**5.1 CHART A**

ITEM	NAME	DRIVE	ULTIMATE WEIGHT	FLOW CFM	FAN RPM	Hz	MOTOR H.P.	VOLTAGE/PH	FRAME TYPE	OUTSIDE FRAME DIMENSION	LENGTH
1	12" FAN	DIRECT	38LBS	1,525	1,750	60	1/3	115V/230V 1PH	48	26" X 26"	11"
2	16" FAN	DIRECT	45LBS	2,760	1,750	60	1/3	115V/230V 1PH	48	32" X 32"	12"
3	20" FAN	DIRECT	71LBS	4,735	1,750	60	3/4	115V/230V 1PH	56	40" X 40"	14"

**5.2 CHART B (MAXIMUM SOUND LEVELS)**

ITEM	NAME	SONES	LwA	dBA @ 5'	dBA @ 10'	dBA @ 20'
1	12" FAN	8.8	69	57	51	45
2	16" FAN	14.4	76	64	58	52
3	20" FAN	21	82	70	64	58