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## **XRUB Specification**

### **Roof Upblast, Belt Driven Fan**

Provide Accurex Exhaust Fan Model XRUB as shown on plans and in accordance with the following specification:

Roof exhaust fans shall be upblast centrifugal belt driven type. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced. The fan housing shall be constructed of heavy gauge aluminum with a rigid internal support structure. Wind bands shall have a rolled bead for added strength and shall be joined to curb caps with a leak proof, continuously welded seam.

Motors shall be heavy duty ball bearing type, carefully matched to the fan load, and furnished at the specified voltage, phase and enclosure. Motors and drives shall be mounted on vibration isolators, out of the airstream. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance. Drive frame assemblies shall be constructed of heavy gauge steel and mounted on vibration isolators.

Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings. Bearings shall be selected for a minimum (L10) life in excess of 100,000 hours at maximum cataloged operating speed. Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts.

Motor pulleys shall be adjustable for final system balancing. A disconnect switch shall be factory installed and wired from the fan motor to a junction box installed within the motor compartment. A conduit chase shall be provided through the curb cap to the motor compartment for ease of electrical wiring.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Fans shall be Model XRUB as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XRUD Specification**

### Roof Upblast, Direct Drive Fan

Provide Accurex Exhaust Fan Model XRUD as shown on plans and in accordance with the following specification:

Roof exhaust fans shall be upblast centrifugal direct drive type. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

The fan housing shall be constructed of heavy gauge aluminum with a rigid internal support structure. Wind bands shall have a rolled bead for added strength and shall be joined to curb caps with a leak proof, continuously welded seam.

Motors shall be mounted out of the airstream on vibration isolators. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance.

A disconnect switch shall be factory installed and wired from the fan motor to a junction box within the motor compartment. A conduit chase shall be provided through the curb cap to the motor compartment for ease of electrical wiring.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Fans shall be Model XRUD as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XSEB Specification**

### **Sidewall Exhaust, Belt Driven Fan**

Provide Accurex Exhaust Fan Model XSEB as shown on plans and in accordance with the following specification:

Sidewall exhaust fans shall be of the centrifugal belt driven type.

Construction of the wind band shall be of heavy gauge aluminum with a rolled bead on the outer edge for strength. The fan wheel and inlet cone shall be aluminum and of the high performance centrifugal blower type. The fan wheel shall be of the aluminum, non-overloading, backward inclined type, statically and dynamically balanced. Blades, fins, inlet cones and back plates shall be securely fastened together into a rigid assembly.

Motors and drives shall be isolated from the exhaust airstream. Motors shall be of heavy duty type with permanently lubricated, sealed ball bearings. Air for cooling the motor shall be taken into the motor compartment by means of an air tube from a location free of discharge contaminants. The entire drive assembly and wheel, as a unit, shall be removable through the support structure without dismantling the fan housing. The wheel shaft shall be mounted in heavy duty, permanently lubricated, sealed ball bearing pillow blocks. Drives shall be sized for 165% of driven horsepower. Pulleys shall be of the machined cast iron type, keyed securely to the fan and motor shafts. Motor pulleys shall be of the adjustable type to allow for final system balancing. The entire drive assembly shall be mounted on vibration isolators to minimize noise transmission.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Fans shall be Model XSEB as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XSED Specification**

### **Sidewall Exhaust, Direct Drive Fan**

Provide Accurex Exhaust Fan Model XSED as shown on plans and in accordance with the following specification:

Sidewall exhaust fans shall be of the centrifugal direct driven type. Construction of the wind band shall be of heavy gauge aluminum and shall have a rolled bead for added strength. Units shall be constructed so that removal of several fasteners shall allow for removal of entire power assembly and wheel for servicing or cleaning.

The fan wheel shall be of the backward inclined, centrifugal type with a well designed inlet venturi for maximum performance. Wheels shall be statically and dynamically balanced to assure minimal noise and vibration generation. Blades, fins, inlet cone and back plate shall be fabricated from aluminum and securely joined together.

Motors and fan wheels shall be mounted on vibration isolators. Motors shall be isolated from the exhaust airstream. Air for cooling the motor shall be taken into the motor compartment from a location free of contaminants. Motors shall be readily accessible for maintenance.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Centrifugal sidewall exhaust fan shall be Model XSED as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XRUBS Specification**

### **Roof Upblast, Belt Driven Grease Fan**

Provide Accurex Exhaust Fan Model XRUBS as shown on plans and in accordance with the following specification:

Spun steel exhaust fans shall be centrifugal belt driven type. Fan wheel shall be centrifugal backward inclined type. The wheel shall be constructed of steel and coated with a non stick coating similar to Teflon™ as manufactured by DuPont. Wheel shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

The fan housing shall be constructed of 16 gauge galvaneal steel with a rigid internal support structure and shall be leak proof. The fan housing shall be constructed with a one piece wind band with an integral rolled bead for added strength and shall be joined to the curb cap with a continuous robotically welded seam. Fan's wind band shall have a Clean Out Port, consisting of a 4 inch diameter hole on the outside of the fan's wind band with a grease repellent compression rubber fit, allowing access to entire wheel for cleaning.

Motors shall be heavy duty ball bearing type, carefully matched to the fan load, and furnished at the specified voltage, phase and enclosure. Drive frame assembly shall be constructed of heavy gauge galvanized steel. Motors and drives shall be mounted on heavy duty true vibration isolators, out of the airstream. Fresh air for motor cooling shall be drawn into the motor compartment through a ten square inch tube free of discharge contaminants. Motors and drives shall be readily accessible for maintenance. Precision ground and polished 1 inch minimum diameter fan shafts shall be mounted in cast pillow block lubricatable ball bearings. Bearings shall be selected for a minimum L10 life in excess of 100,000 hours (L50 life of 500,000 hours) at maximum cataloged operating speed. Dual drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the cast type, keyed and securely attached to the wheel and motor shafts. Motor pulleys shall be adjustable for final system balancing. All fans shall have a dual belt and pulley system. A NEMA-3R disconnect switch shall be factory installed and wired from the fan motor to a junction box installed outside the motor compartment.

Hinge kit shall be factory mounted to a separate base and constructed of heavy gauge hinges and shall include hold open cables.

Grease Trap shall include the drain connection. The unit shall collect grease and water from the fan and extract the grease from the water for ease of grease disposal.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Fans shall be Model XRUBS as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XTIF Specification**

### **Duct Mounted, Belt Driven In-Line Fan**

Provide Accurex Exhaust Fan Model XTIF as shown on plans and in accordance with the following specification:

Commercial tubular centrifugal in-line fans shall be the belt driven type with the wheel secured to the fan shaft. Fans selected shall be capable of accommodating static pressure and flow variations of +/-15% of scheduled values. Fans are to be equipped with lifting lugs. Fan housing to be aerodynamically designed with punched inlet and outlet flanges for ductwork connection on inline fans. Fan housing shall be constructed of rolled steel with a continuous seam weld. Housing and bearing support shall be constructed of welded structural steel members to prevent vibration and rigidly support the shaft and bearings. Either an OSHA compliant weatherhood, or an OSHA compliant belt guard shall be included to completely cover the motor pulley and belt(s).

The fan wheel shall be of the non-overloading backward inclined centrifugal type. Wheels shall be statically and dynamically balanced to balance grade G6.3 per ANSI S2.19. Wheel shall be constructed with half-welded and half-riveted aluminum or completely welded aluminum. The wheel and fan inlet shall be carefully matched and shall have precise running tolerances for maximum performance and operating efficiency.

Motors shall meet or exceed EPACT (Energy Policy ACT) efficiencies. Motors to be NEMA T-frame, 1800 or 3600 RPM, Open Drip Proof (ODP) or Totally Enclosed Fan Cooled (TEFC) with a 1.15 service factor. Drive belts and sheaves shall be sized for 150% of the fan operating brake horsepower, and shall be readily and easily accessible for service, if required. Fan shaft to be turned and polished steel that is sized so the first critical speed is at least 25% over the maximum operating speed for each pressure class. Fan shaft bearings shall be Air Handling Quality, bearings shall be heavy-duty grease lubricated, self-aligning or roller pillow block type. Bearings shall be 100% tested for noise and vibration by the manufacturer. Bearings shall be 100% tested to insure the inner race diameter is within tolerance to prevent vibration. Bearings shall be selected for a basic rating fatigue life (L-10) of 80,000 hours at maximum operating speed for each pressure class [Average Life or (L-50) of 400,000 hours]. Bearings shall be fixed to the fan shaft using concentric mounting locking collars, which reduce vibration, increase service life, and improve serviceability. Bearings shall have extended lube lines with Zerk fittings to allow for lubrication.

Fan shall be coated with a minimum of 2-4 mils of Permator (Polyester Urethane), electrostatically applied and baked.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Fans shall be Model XTIF as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XIB Specification**

### **Duct Mounted, Belt Driven In-line Fan**

Provide Accurex Exhaust Fan Model XIB as shown on plans and in accordance with the following specification:

Duct mounted supply, exhaust or return fans shall be of centrifugal belt driven in-line type. The fan housing shall be of the square design constructed of heavy gauge galvanized steel and shall include square duct mounting collars.

Fan construction shall include two removable access panels located perpendicular to the motor mounting panel. The access panels must be of sufficient size to permit easy access to all interior components.

The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

Motors shall be heavy duty ball bearing type, carefully matched to the fan load and furnished at the specified voltage, phase and enclosure. Motors and drives shall be mounted out of the airstream.

Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings. Bearings shall be selected for a minimum (L10) life in excess of 100,000 hours at maximum cataloged operating speed.

Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts.

Motor pulleys shall be adjustable for system balancing. A NEMA 1 disconnect switch shall be provided as standard, except with explosion resistant motors, where disconnects are optional. Factory wiring shall be provided from motor to the handy box.

All fans shall bear the AMCA Certified Ratings Seal for both sound and air performance.

Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fans shall be Model XIB as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XID Specification**

### **Duct Mounted, Direct Drive In-Line fan**

Provide Accurex Exhaust Fan Model XID as shown on plans and in accordance with the following specification:

Duct mounted supply, exhaust or return fans shall be of centrifugal, direct driven in-line type.

The fan housing shall be of the square design, constructed of heavy gauge galvanized steel and shall include square duct mounting collars.

Fan construction shall include two removable access panels located perpendicular to the motor mounting panel. The access panels must be sufficient size to permit easy access to all interior components.

The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

Motors shall be permanently lubricated and carefully matched to the fan loads. Motors shall be readily accessible for maintenance.

A NEMA 1 disconnect switch shall be provided as standard, except with explosion resistant motors, where disconnects are optional. Factory wiring shall be provided from motor to the handy box.

All fans shall bear the AMCA Certified Ratings Seal for both sound and air performance.

Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fans shall be Model XID as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XUEB Specification**

### **Backward-Inclined, Belt Driven Utility Fan**

Provide Accurex Exhaust Fan Model XUEB as shown on plans and in accordance with the following specification:

Supply, exhaust and return air fans shall be of the belt driven utility fan type in AMCA Arrangement 10 with a single width, single inlet housing, in CW or CCW rotation as specified.

The housing shall be constructed of heavy gauge steel with air tight lock formed seams; galvanized steel on Series 100, painted steel on Series 200 or aluminum optional. The housing shall be field rotatable to any of the eight standard discharge positions. Housing and bearing supports shall be constructed of welded steel members to prevent vibration and to rigidly support the shaft and bearings.

The fan wheel shall be of the non-overloading backward inclined, centrifugal fan type and constructed of heavy gauge steel for the Series 200 (except sizes 206 to 210 have aluminum) and aluminum for the Series 100. Wheels shall be statically and dynamically balanced. The wheel cone and fan inlet cone shall be carefully matched for maximum performance and operating efficiency.

Motors shall be heavy duty, ball bearing type matched to the fan load and furnished at the specified voltage, phase and enclosure.

The fan shaft shall be ground and polished solid steel mounted in heavy duty, permanently sealed, pillow block ball bearings. Bearings shall be selected for a minimum L10 life in excess of 100,000 hours (L50 average life of 500,000 hours) at maximum cataloged operating speed. Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. The motor pulley shall be adjustable for final system balancing.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's engraved metal nameplate containing the model number and individual serial number for future identification.

Fans shall be listed by Underwriters Laboratory for UL/cUL 762 Listed for all electrical components and grease removal.

Utility fans shall be Model XUEB (with backward inclined wheels) as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XREB Specification**

### **Roof Exhaust, Belt Driven Fan**

Provide Accurex Exhaust Fan Model XREB as shown on plans and in accordance with the following specification:

Roof exhaust fans shall be centrifugal belt driven type. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced. The fan housing shall be constructed of heavy gauge aluminum with a rigid internal support structure. The fan shroud shall have a rolled bead for added strength.

Motors shall be heavy duty ball bearing type, carefully matched to the fan load, and furnished at the specified voltage, phase and enclosure. Motors and drives shall be mounted on vibration isolators, out of the airstream. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance.

Drive frame assemblies shall be constructed of heavy gauge steel and mounted on vibration isolators. Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings. Bearings shall be selected for a minimum (L10) life in excess of 100,000 hours at maximum cataloged operating speed. Drives shall be sized for a minimum of 150 percent of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. Motor pulleys shall be adjustable for final system balancing.

A disconnect switch shall be factory installed and wired from the fan motor to a junction box installed within the motor compartment.

A fan conduit chase shall be provided through the curb cap to the motor compartment for ease of installation.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fans shall be Model XREB as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XRED Specification**

### Roof Exhaust, Direct Drive Fan

Provide Accurex Exhaust Fan Model XRED as shown on plans and in accordance with the following specification:

Roof exhaust fans shall be centrifugal direct drive type. The fan wheel shall be centrifugal backward inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced. The fan housing and shroud shall be constructed of heavy gauge aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

The fan housing and shroud shall be constructed of heavy gauge aluminum with a rigid internal support structure. The fan shroud shall have a rolled bead for added strength. Motors shall be mounted out of the airstream on vibration isolators. Fresh air for motor cooling shall be drawn into the motor compartment from an area free of discharge contaminants. Motors shall be readily accessible for maintenance. A disconnect switch shall be factory installed and wired from the motor compartment for ease of electrical wiring.

All fans shall bear the AMCA Certified Ratings Seal for sound and air performance.

Each fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fans shall be Model XRED as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XCR Specification**

### **Ceiling Fan**

Provide Accurex Exhaust Fan Model XCR as shown on plans and in accordance with the following specification:

Ceiling mounted exhaust fans shall be of the centrifugal direct drive type. The fan housing shall be constructed of standard steel or heavy gauge galvanized steel. The housing interior can be lined with 0.5 in acoustical insulation.

The duct collar can be plastic or steel, shall include a back draft damper that may be adaptable for horizontal or vertical discharge and is available to receive 3-6 inch ductwork.

The grille shall be constructed of non-yellowing high strength polymer, impact polystyrene or aluminum. The grille shall be attached to the housing with screws or torsion springs.

The access for wiring shall be external. The motor disconnect shall be internal and of the plug in type. The motor can be mounted on vibration isolators.

The fan wheel(s) can be of the forward curved centrifugal type and constructed of galvanized steel, calcium carbonate filled polypropylene or high strength polymer and may be dynamically balanced.

The exhaust fan may have performance capabilities of 29 CFM to 1,607 CFM and up to 0.75 in wg of static pressure.

All fans shall be licensed to bear the AMCA Certified Ratings Seals for sound and air performance and shall be U.L. Listed and C.S.A. approved.

Ceiling or wall mount fans shall be Model XCR as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.



## **XIR Specification**

### **Cabinet Fan**

Provide Accurex Exhaust Fan Model XIR as shown on plans and in accordance with the following specification:

Duct mounted supply, exhaust or return fans shall be of the centrifugal, direct drive type. The fan housing shall be constructed of heavy gauge galvanized steel and shall include pre-punched mounting brackets. The housing interior shall be lined with 0.5 in acoustical insulation. The outlet duct collar shall include an aluminum back draft damper and shall be adaptable for horizontal or vertical discharge.

The access for wiring shall be external. The motor disconnect shall be internal and of the plug in type. The motor shall be mounted on vibration isolators. The fan wheel(s) shall be of the forward curved centrifugal type, constructed of either galvanized steel or plastic and dynamically balanced.

Fans shall be licensed to bear the AMCA Certified Ratings Seal for air performance and shall be U.L. Listed.

Duct mounted supply, exhaust or return fans shall be Model XIR as manufactured by Accurex.

Due to continuous research Accurex reserves the right to change specifications without notice.