# DU-HFA

## CENTRIFUGAL UPBLAST DIRECT DRIVE FANS

- Air Volume: 2 – 22,500 cfm
- Maximum SP: 4" wg. @ standard air density

## FEATURES & BENEFITS

- Completely enclosed drive compartment protects motor from airborne contaminants
- Forced fresh air through the motor compartment cools motor and ensures long motor life
- Variable Speed Control on Single Phase Units Only. (VFDs required to adjust speed for 3 phase versions)
- Non-overloading backward inclined wheels, blades and inlets fabricated from aluminum
- Units up to 24" nominal wheel can be wall mounted
- Quick release latches allow for easy access to motor compartment. (Size 12 & larger)
- Standard emergency disconnect switch (Size 12 & larger)

## OPTIONS

- Gravity Damper. (UL705 Only)
- Motorized Damper. (UL705 Only)
- Wall Mount Sleeve.
- Roof Curb. (Vented and Non-Vented)
- Grease Collection Box. (Size 12 & larger)
- Bird Screen. (UL705 Only)
- Base Hinging Kit or Hinged Sub Base. (for NFPA96 compliance)
- Combination package that includes a supply fan mounted on the same roof curb.

## CERTIFICATIONS

CaptiveAire certifies that Model DU10HFA thru DU360HFA shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311, and comply with the requirements of the AMCA Certified Rating Program.

Models DU10HFA thru DU360HFA are ETL Listed under file number 102628244PRT-001 and comply with UL705 (electrical) Standards and CSA Std C22.2, No 113.

Models DU12HFA thru DU360HFA are ETL Listed under file number 103336443COL-001 and comply with UL762 and ULC-S645 Standards.

# DU-HFA Specification

## TYPICAL SPECIFICATIONS

### Model: DU-HFA

**Description:** Fan shall be a spun aluminum and G90 Galvanized, roof or wall mounted, direct drive, upblast centrifugal exhaust ventilator. Fans up to and including models with a 24” nominal wheel and a 2 HP motor are suitable for wall mounting.

**Application:** Centrifugal roof exhausters are engineered to discharge grease laden vapors, fumes and other contaminants vertically away from the building.

**Certifications:** All models shall be ETL Listed and comply with UL705 (electrical) Standards and CSA Std C22.2, No 113. Models 12 thru 85 are ETL Listed and comply with UL762 and ULC-S645 Standards. Fan shall bear the AMCA certified ratings seal for sound and air performance.

### Construction:

### Housing

The fan windband shall be constructed of heavy gauge aluminum or G90 Galvanized and shall be spun on an automatic lathe to provide consistent dimensions. Horizontal and vertical internal supports shall be used to securely fasten the windband to the discharge apron to provide rigidity for hinging and added strength to reduce shipping damage. The discharge apron shall have a rolled bead for added strength.

### Base

The base shall be constructed of galvanized steel for improved rigidity. Base corners shall be welded to provide strength and support for hinging and cleaning and to prevent leakage into the building.

### Wheel

The fan wheel shall be centrifugal backward inclined and non-overloading. Wheels shall be balanced in two planes and done in accordance with AMCA standard 204-96, *Balance Quality and Vibration Levels for Fans* . The wheel blades shall be aerodynamically designed to minimize turbulence, increase efficiency and reduce noise. The wheel blades shall be welded to the wheel inlet cone. In the event that balancing weights are required they shall be riveted to the blades or wheel. The wheel inlet shall overlap the fan base inlet for maximum performance and efficiency. The wheel shall be firmly attached to the motor shaft with two set screws.

### Motor & Motor Compartment

Standard 115 volt, open drip motors shall be permanently lubricated, rated for continuous duty and thermally protected. Motors shall be mounted out of the airstream and furnished at the specified voltage, phase and enclosure. Motor mounting plate shall be constructed of heavy gauge galvanized steel. The motor compartment shall be cooled by outside air drawn through an extruded aluminum conduit tube. To seal the conduit tube passage and prevent noise silicone rubber grommets shall isolate the conduit tube from the fan housing. The motor compartment shall be of a two-piece construction with the cap having quick release clips to provide quick and easy access to the motor compartment.

**Grease Spout**

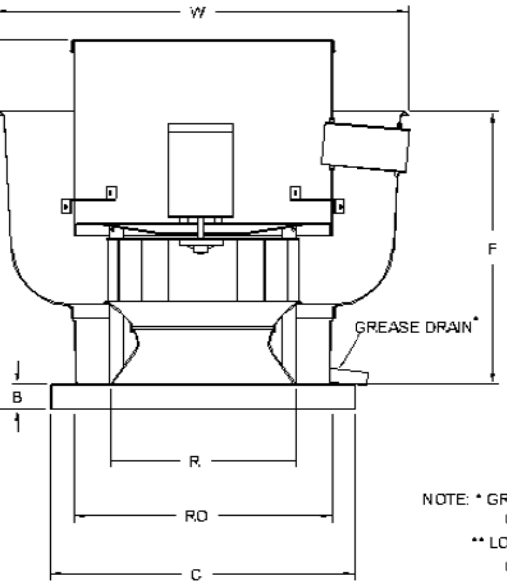
A grease spout made of aluminum tubing shall be welded to the fan housing. The weld shall be factory tested to ensure it will not leak.

**Nylon Washers**

To provide a tight seal all fasteners in the fan housing shall be backed with nylon washers.

**Product: Fan shall be model DU-HFA as manufactured by CaptiveAire Systems.**

# RIES UPBLAST EXHAUST FANS (UL705)



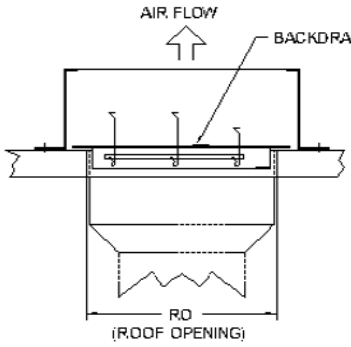

## FEATURES:

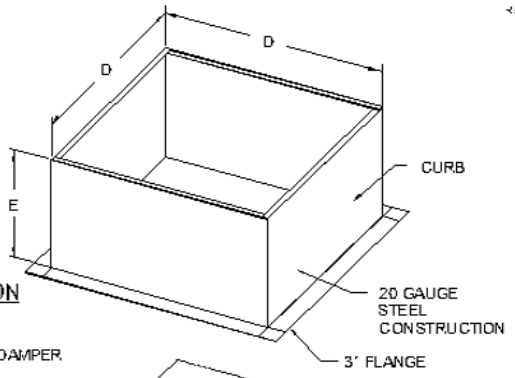
- DIRECT DRIVE CONSTRUCTION (NO BELTS/ PULLEYS)
- ROOF MOUNTED FANS
- UL705
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)

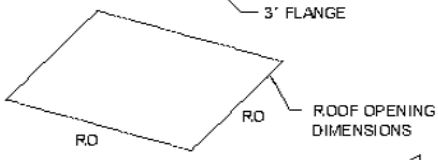
## OPTIONS:

BACKDRAFT DAMPER
HINGED FAN
PITCHED CURB
INSULATED CURB
BIRD SCREEN
LOW PROFILE OPTION

## BACKDRAFT DAMPER INSTALLATION

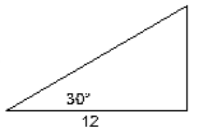



NOTE: * GREASE DRAIN NOT REQ'D ON DU10L/HFA
** LOW PROFILE 'HT' DIMENSION CHANGES.

PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.




SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

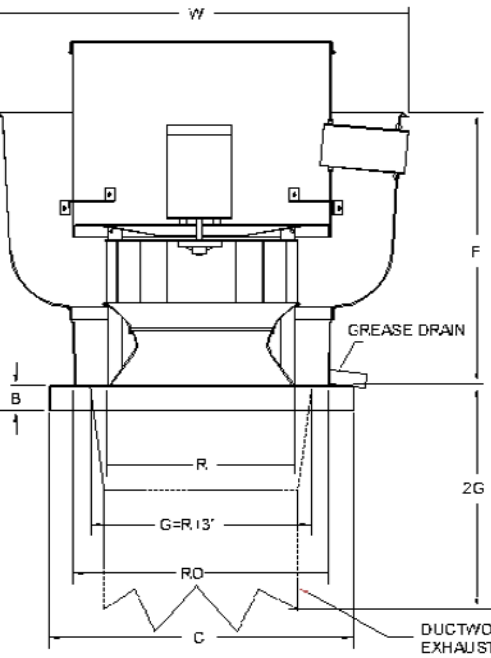
DU DIRECT DRIVE
CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

| FAN MODEL | HT | **HT | W | B | C | F | R | RO | WEIGHT LB |
|---|---|---|---|---|---|---|---|---|---|
| DU10 | 14 1/2 | N/A | 17 3/4 | 2 | 19 | 9 1/2 | 8 1/8 | 13 | 30 |
| DU12 | 18 | 17 | 22 | 2 | 19 | 14 1/2 | 10 5/8 | 13 | 40 |
| DU30 | 25 1/4 | 20 1/4 | 25 1/2 | 2 | 21 | 18 1/2 | 12 1/8 | 16 | 50 |
| DU33 | 25 1/4 | 20 1/4 | 25 1/2 | 2 | 21 | 18 1/2 | 12 1/8 | 16 | 50 |
| DU50 | 27 1/4 | 23 1/4 | 28 7/8 | 2 | 21 | 21 1/2 | 13 1/4 | 16 | 55 |
| DU85 | 30 1/2 | 25 1/2 | 31 7/8 | 2 | 24 3/4 | 23 | 14 7/8 | 20 | 60 |
| DU180 | 33 3/4 | N/A | 39 3/8 | 2 | 28 | 22 5/8 | 16 1/2 | 24 | 190 |
| DU200 | 33 3/8 | N/A | 38 7/8 | 2 | 28 | 29 1/2 | 18 | 24 | 195 |
| DU240 | 37 1/2 | N/A | 43 3/8 | 2 | 33 | 30 5/8 | 23 7/8 | 28 | 270 |
| DU300 | 44 | N/A | 52 3/4 | 2 | 40 | 33 1/2 | 24 | 36 | 410 |
| DU360 | 49 9/16 | N/A | 63 5/16 | 2 | 44 | 43 7/16 | 25 1/4 | 40 | 470 |

CURB DIMENSIONAL DATA

| FAN MODEL | D | E |
|---|---|---|
| DU10 | 17 1/2 | 12 |
| DU12 | 17 1/2 | 12 |
| DU30 | 19 1/2 | 12 |
| DU33 | 19 1/2 | 12 |
| DU50 | 19 1/2 | 12 |
| DU85 | 23 | 12 |
| DU180 | 26 1/2 | 12 |
| DU200 | 26 1/2 | 12 |
| DU240 | 31 1/2 | 12 |
| DU300 | 38 1/2 | 12 |
| DU360 | 42 1/2 | 12 |

# RIES UPBLAST EXHAUST FANS (UL762)




## FEATURES:

- DIRECT DRIVE CONSTRUCTION( NO BELTS/ PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 & UL762 & ULC-S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

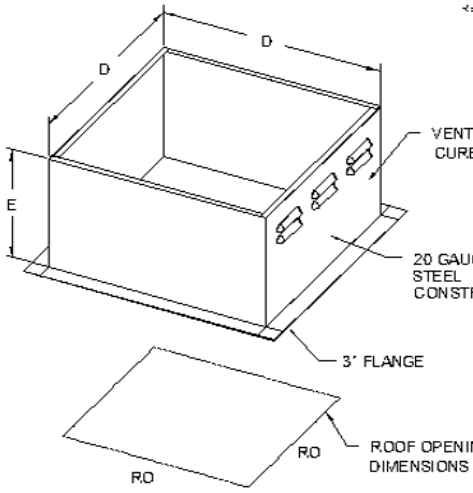
NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

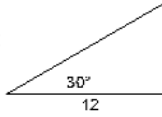
## OPTIONS:

GREASE BOX
HINGED FAN
PITCHED CURB
INSULATED CURB
LOW PROFILE OPTION

NOTES: ** LOW PROFILE 'HT' DIMENSION CHANGES.




PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.




SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE

DU DIRECT DRIVE
CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

| FAN MODEL | HT | **HT | W | B | C | F | R | RO | WEIGHT LB |
|---|---|---|---|---|---|---|---|---|---|
| DU12 | 18 | 17 | 22 | 2 | 19 | 14 1/2 | 10 5/8 | 17 | 40 |
| DU30 | 25 1/4 | 20 1/4 | 25 1/2 | 2 | 21 | 18 1/2 | 12 1/8 | 19 | 50 |
| DU33 | 25 1/4 | 20 1/4 | 25 1/2 | 2 | 21 | 18 1/2 | 12 1/8 | 19 | 50 |
| DU50 | 27 1/4 | 23 1/4 | 28 7/8 | 2 | 21 | 21 1/2 | 13 1/4 | 19 | 55 |
| DU85 | 30 1/2 | 25 1/2 | 31 7/8 | 2 | 24 3/4 | 23 | 14 7/8 | 22 1/2 | 60 |
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| DU360 | 49 9/16 | N/A | 63 5/16 | 2 | 44 | 43 7/16 | 30 | 42 | 470 |

CURB DIMENSIONAL DATA

| FAN MODEL | D | E |
|---|---|---|
| DU12 | 17 1/2 | 26 |
| DU30 | 19 1/2 | 22 |
| DU33 | 19 1/2 | 22 |
| DU50 | 19 1/2 | 20 |
| DU85 | 23 | 20 |
| DU180 | 26 1/2 | 20 |
| DU200 | 26 1/2 | 20 |
| DU240 | 31 1/2 | 20 |
| DU300 | 38 1/2 | 20 |
| DU360 | 42 1/2 | 20 |