TCF

TWIN CITY FAN

INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL ROOFTOP EXHAUST FANS
LOW PROFILE HOODED & LOUVERED

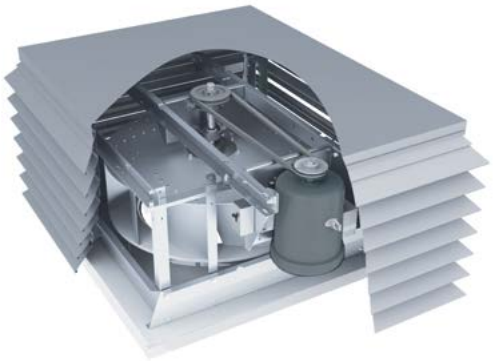
DCLH | BCLH | DCLP | BCLP

Model DCLH
Direct Drive

Now Available with

GRIDSMART™
EC MOTORS

see page 7



Cutaway of
Model BCLP

Overview

DCLH I BCLH I DCLP I BCLP

Twin City Fan & Blower's line of Low Profile Centrifugal Roof Exhausters provide quiet and efficient ventilation in general, clean air applications. These units are designed to offer world class performance and quality. The compact design and low contour minimizes the extension above the roof line and gives the BCL and DCL series an inconspicuous appearance. This makes them the ideal choice for installations viewed from street level to maintain an attractive architectural appearance.

Typical Applications Include

Agriculture, Automotive, Boilers, Brick, Car Wash, Commercial Plan & Spec, Composting, Ethanol, Food & Beverage, Foundry, General Manufacturing, Glass, HVAC, Institutional & Hospitality, Metal & Minerals, Microchip, OEM, Pharmaceutical, Power Generation, Recycling, Textile, Transportation

Impeller Types

Backward Inclined Centrifugal

Optional Construction

Special Coatings, UL 705

Certifications

UL 705 Listed for Electrical

Energy Regulations

Twin City Fan & Blower supports energy efficiency regulations enacted by the U.S. Department of Energy (DOE) and specific states. The selection and application of fan products is a significant part of these regulations. Engineers and specifiers must understand how to apply TCF products to their specific applications to meet applicable DOE and state regulatory requirements. Twin City Fan & Blower has made significant investments in product testing and development to provide efficient products. Developments in Twin City Fan & Blower's Fan Selector software are in place to aid your decision in product selection to assist with meeting the efficiency requirements as stipulated in the applicable regulations.

c UL us

DCLH, BCLH, DCLP & BCLP models are cULus 705 listed for electrical, File No. E158680.

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For complete product performance, drawings and available accessories, download our Fan Selector software at *tcf.com*.

Overview

DCLH I BCLH I DCLP I BCLP

Hooded

Hooded models DCLH (direct drive) and BCLH (belt driven) are available for exhaust service in general, clean air applications. They feature a hinged, removable galvanized steel hood for cleaning and servicing the fan and a galvanized steel wire bird screen along the perimeter of the hood.

DCLH (Direct Drive)
8 to 12.38" impeller diameters
Airflow to 2,000 CFM
Static pressure to 1" w.g.

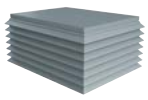
BCLH (Belt Driven)
8.5 to 55.12" impeller diameters
Airflow to 36,000 CFM
Static pressure to 3.25" w.g.

General HVAC Exhaust
(Hooded Roof Exhausters)

Louvered

Louvered penthouse models DCLP (direct drive) and BCLP (belt driven) are available for exhaust service in general, clean air applications. These models feature a tiered aluminum louvered penthouse enclosure with a removable aluminum top cover and a galvanized steel mesh bird screen positioned vertically behind the louvers.

DCLP (Direct Drive)
8 to 12.38" impeller diameters
Airflow to 2,000 CFM
Static pressure to 1" w.g.

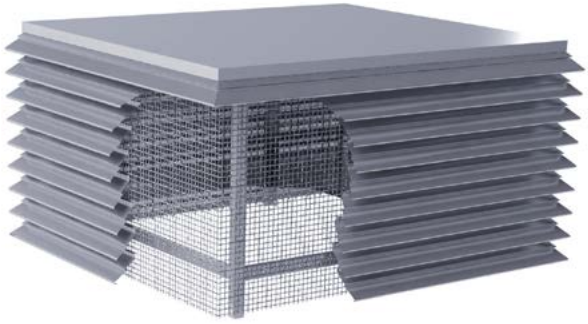


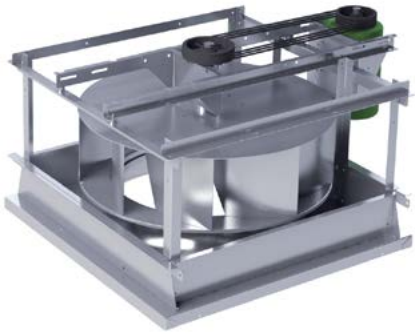
BCLP (Belt Driven)
8.5 to 55.12" impeller diameters
Airflow to 36,000 CFM
Static pressure to 3.25" w.g.

General HVAC Exhaust
(Louvered Roof Exhausters)

CONSTRUCTION

Model BCLH





Model BCLP

Impeller

Quiet and efficient non-overloading impellers with backwardly curved blades are precisely matched to a deep spun venturi. All impellers are statically and dynamically balanced to ensure smooth and quiet operation.

Housing

DCLH/BCLH - Models DCLH and BCLH are equipped with the Twin City Fan & Blower modular hood. Interlocking galvanized steel panels offer superior strength and rigidity compared with conventional hood designs. The profile of the hoods also allows rain and snow to run off, making the units completely weather tight. Hoods either pivot open or can be removed completely to allow for convenient access, inspection and maintenance.

DCLP/BCLP - Models DCLP and BCLP feature extruded aluminum louvers with precision mitered and welded corners. The tiered louver design not only gives these models structural rigidity, but also makes them aesthetically pleasing. Removable, cross broke aluminum top covers make for quick and easy inspection of the internal components.

Curb Cap

One-piece curb cap/inlet venturi assembly provides complete protection from weather. Prepunched mounting holes provide easy and accurate attachment to the roof curb.

Vibration Isolation

Motor and drive assembly is completely isolated from the fan supports by rubber isolators to reduce transmission of noise and vibration.

Motors

ODP, TEFC and explosion proof, single- and three-phase motors are carefully matched to the fan load.

Galvanized Bird Screen

Both hooded and louvered units feature galvanized steel bird screens to protect the impeller, inlet and internal components from entry of birds.

Disconnect Switch

Standard on all units. Fans are provided with a NEMA 1 type disconnect switch mounted in the motor compartment when ODP or TEFC motors are used. When explosion proof motors are specified, a NEMA 7/9 disconnect switch will be shipped loose for field mounting and wiring.

The Twin City Fan & Blower modular hood provides numerous benefits over conventional sheet metal hood designs.

BCLH, Belt Driven
(Showing how hood
panels stack together)

Hood Construction

- The Twin City Fan & Blower modular hood design features ribbed panels, which provide added strength and rigidity. This is particularly important in climates where snow loads are a consideration.
- Hood profile allows rain and snow to run off.
- Hoods are galvanized steel as standard, but can also be constructed of aluminum or painted steel to accommodate specific application requirements.

Easy Access

- Fan sizes 14 to 36 incorporate a pivoted hood design. By removing two fasteners, the hood can be opened up for convenient cleaning and service.
- Fan sizes 42 to 60 allow for the entire hood to be taken off by removing four fasteners.
- Exhaust and supply fans are constructed with motor and drive components easily accessible from the roof. There is no need to try and access components below the roof line or through an access door.
- Units include removable bird screens, which can be removed with the hood still in place to allow for quick and easy inspection of the fan components without taking off the hood.

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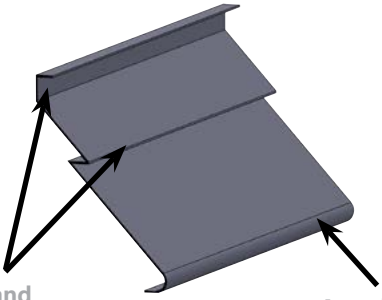
Penthouse Models DCLP and BCLP

Durable Design

Models DCLP and BCLP utilize an aluminum louvered penthouse enclosure. The louvers are made from extruded aluminum and corners are precision miter cut and welded. The tiered louver design not only gives these models structural rigidity, but also makes them aesthetically pleasing.



Weather Resistance

The extruded aluminum louvers have double weather and snow baffles for added weather protection. In addition, the curb cap features a vertical baffle to guard against storm driven rain and snow.

Accessibility

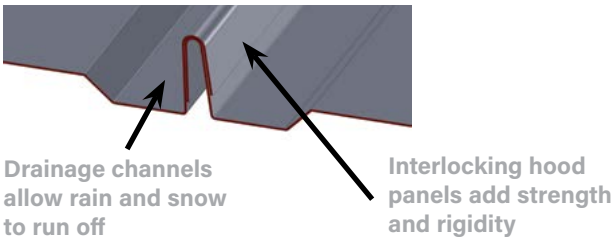
All fans feature a heavy-duty removable, cross broke aluminum top cover. The easily removable top covers provide access to motor, drives and impeller.

Model BCLP

Hooded Models BCLH and DCLH

Durable Design

Fan & Blower modular hood design. Individual galvanized steel panels interlock to create a hood assembly that offers superior strength over conventional style hoods. The smooth curves and clean lines of the modular hood also give it a more pleasing appearance than traditional hoods.



Weather Resistance

The profile of the hoods allows for rain and snow to run off while the overlapping ribs ensure a weather tight fit. The curb cap features a vertical baffle to guard against storm driven rain and snow.

Accessibility

Fans incorporate a pivoted hood design. By simply removing two fasteners, the hood can be easily opened for access to internal components. The hood can also be completely removed by unbolting four fasteners. Accessibility for inspection, cleaning and maintenance is fast and simple with the modular hood on models DCLH and BCLH.

Models BCLH and DCLH

Twin City Fan & Blower offers its own line of custom engineered Electronically Commutated (EC) motors. Electronic commutation is the latest motor technology to be used in direct drive fans. Also known in the industry as Brush Free or Brushless DC, the EC motors utilize an electronic circuit board to control the functionality of the motor. The motor operates off of single-phase AC power, which is converted to DC power within the motor's circuitry. TCF has motor options available for 115V, 208-230V or 277V single-phase electrical power. The result is a highly efficient motor, even at part load, with an expanded speed control range and a variety of speed control options from which to choose. EC motors are available in ODP, TENV and TEFC enclosures.

GRIDSMART™ EC MOTORS

Model DCLH
With GridSmart™ EC Motor

Benefits

- Efficiencies up to 85%
- Constant efficiency as the motor speed is varied
- Up to 66% energy savings over traditional PSC motors
- Performance range comparable to a belt drive fan with reduced maintenance benefits of a direct drive fan
- 80% usable turndown range as compared with 40% maximum on PSC motors
- Soft start gives fans smooth, quiet start
- Lower operating temperatures result in longer life and reduces energy consumption
- Heavy-duty ball bearings are permanently lubricated
- Elimination of VFD results in lower initial cost

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EC Motor Options

1/6HP to 1HP

- 1/6HP: 115V, single-phase
- 1/4HP – 1HP: 115V, 208-230V, 277V, single-phase
- ODP or TENV Enclosure
- Motor mounted speed control dial as standard
- 0-10VDC control leads as standard
- Available with remote mounted speed control dial

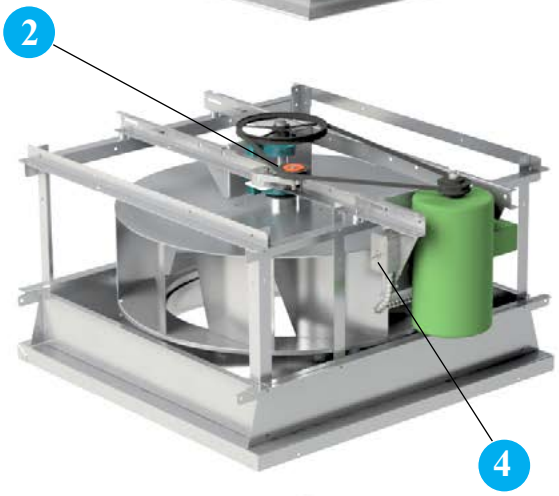
1HP & 2HP

- 1HP: 115V, 208-230V, single-phase
- 2HP: 208-230V, single-phase
- TEFC enclosure (totally enclosed fan cooled)
- Available with motor mounted speed dial or 0-10VDC control lead

1HP & 2HP
GridSmart™ EC Motors

1/6HP to 1HP
GridSmart™ EC Motors

OPTIONS/ACCESSORIES



1 **Self-Flashing Roof Curb** Prefabricated roof curbs are available in heavy-duty galvanized steel or aluminum construction, in heights of 8", 12" or 18". The self-flashing curb is provided with a factory installed $^{3}/_{16}$" polystyrene gasket. Curbs are provided with 1.5" of insulation as standard and feature continuously-welded seams for added rigidity and moisture protection. Prefabricated curbs are also available in raised cant, pitched and peak models. Refer to Catalog 4910 for complete details on roof curb options. Minimum 12" high curbs are recommended for use with motorized dampers.

2 **Auto Belt Tensioner** Spring loaded pulley used for automatic belt tensioning. Eliminates the need for regular belt tensioning and extends belt life.

3 **Backdraft Damper** Backdraft dampers with automatic or motorized operation, feature a felt seal on the edge of the damper blades for quiet operation. Damper frames are constructed of galvanized steel and blades are constructed of 26-gauge aluminum. All dampers ship loose for field mounting in ductwork. Motorized dampers are recommended for low CFM applications to assure unrestricted airflow. Motorized dampers are available with 115, 208, 230, 460, 575 or 24 volt service. End switches are available. When a motorized damper option is selected a 12" (or greater) high roof curb is required.

4 **NEMA 1 Disconnect Switch** A NEMA 1 disconnect switch is available shipped loose for field mounting and wiring or factory mounted and wired with ODP or TEFC motors.

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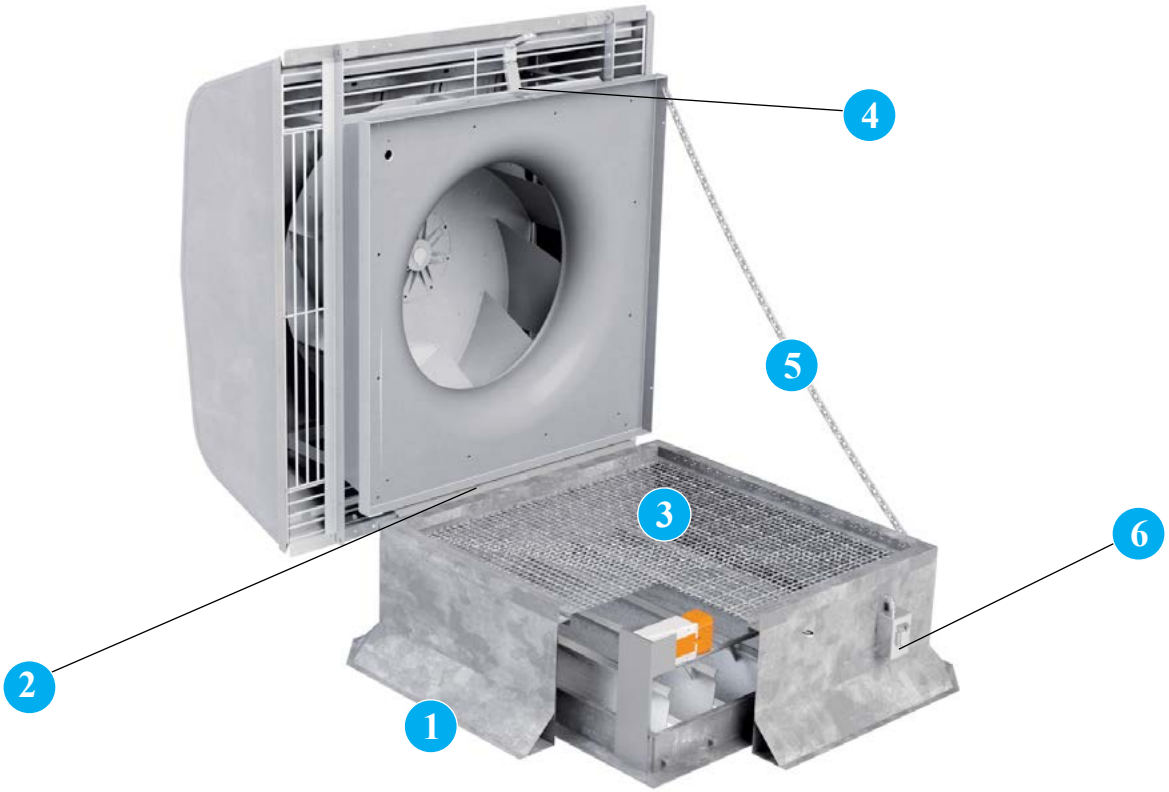


1 **Canted Roof Curb** Prefabricated roof curbs are available in heavy-duty galvanized steel or aluminum construction, in heights of 8", 12" or 18". The canted curb is provided with a factory installed wood nailer. Curbs are provided with 1.5" of insulation as standard and feature continuously-welded seams for added rigidity and moisture protection. Prefabricated curbs are also available in raised cant, pitched and peak models. Refer to Catalog 4910 for complete details on roof curb options. Minimum 12" high curbs are recommended for use with motorized dampers.

2 **Curb Hinge** The curb hinge arrangement provides easy access to the exhaust fan, backdraft damper and duct for servicing and cleaning. The curb hinge is of the piano type, running the entire length of the fan's curb cap. The curb hinge option ships loose and is designed for use with a standard canted curb only (1.5" less than fan base). This option cannot be used with self-flashing curbs.

3 **Insect Screen** Provides protection from entry of insects into the interior of the building through the impeller inlet.

4 **Security Hasp** A security hasp is available in conjunction with the curb hinge arrangement to prevent removal of the unit from the unit curb cap and prevent entrance into the building through the roof's ductwork.

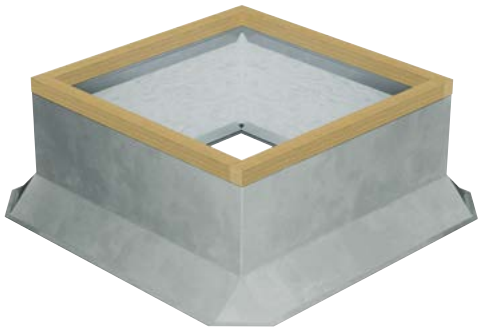
5 **Retaining Chain** is available in conjunction with the curb hinge arrangement to stabilize the unit and to prevent damage from occurring to the unit while servicing and cleaning.

6 **NEMA 3R Disconnect Switch** A NEMA 3R, rain proof, disconnect is available shipped loose for field mounting & wiring or factory mounted and wired.

OTHER ACCESSORIES/OPTIONS:

- Special Coatings
- Two-Speed Switch (Single-Phase, 1 HP and below)
- Firestat (Single-Phase)
- Performance Baffle
- NEMA Disconnect Switch (see page 11)
- Roof Curbs (see page 10)
- Variable Speed Control

PREFABRICATED ROOF CURBS



Canted Roof Curbs

- Constructed of 18-gauge galvanized steel with continuously-welded seams
- Large 3" built-in 45° cant to accommodate roofing material to top of curb. Cant is beveled at corners for better support of roofing material
- Wood nailer ($1^1/_2$") secured to top ledge
- Lined with $1^1/_2$" fiberglass fire-resistant, sound-absorbing insulation
- Damper shelf standard
- Options: Aluminum (16-gauge) construction, burglar security bars, metal liner (galvanized or aluminum), special heights up to 24", single- or double-pitched curbs for sloping roofs

Self-Flashing & Straight-Sided Roof Curbs

- Constructed of 18-gauge galvanized steel with continuously-welded seams
- Wide base plate (flashing) to insure watertight seal to roof
- Top ledge covered with $^3/_{16}$" polystyrene gasket (self-flashing) for weather seal and to reduce metal-to-metal conducted noise
- Wood nailer secured to top ledge (straight-sided)
- Lined with $1^1/_2$" fiberglass fire-resistant, sound-absorbing insulation
- Damper shelf standard
- Straight-sided roof curbs are constructed with the same features as the self-flashing curbs, but are one dimensional to allow for field supplied cants and roofing material to be brought up to the top of the curb
- Options: Aluminum (16-gauge) construction, burglar security bars, metal liner (galvanized or aluminum), special heights up to 24", single- or double-pitched curbs for sloping roofs

Curb Adapters

- Constructed of heavy-gauge galvanized steel with continuously-welded seams
- Top ledge covered with $^3/_{16}$" polystyrene gasket to reduce metal-to-metal conducted noise and act as a weather seal
- Available in enlarger or reducer (shown) models

Disconnect switches provide positive electrical shutoff during fan cleaning or maintenance.

NEMA 1 Disconnect Switch (Standard)

A NEMA 1 disconnect switch is available shipped loose for field mounting and wiring or factory mounted and wired with ODP or TEFC motors.

NEMA 1 Disconnect Switch

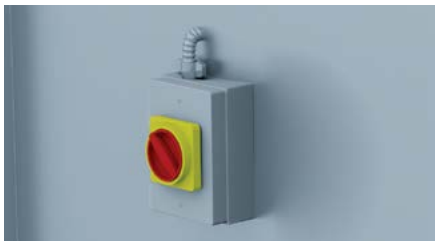
NEMA 3R Disconnect Switch

A NEMA 3R, rain proof, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.

NEMA 3R Disconnect Switch

NEMA 4 Disconnect Switch

A NEMA 4, water and dust tight, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.



NEMA 4 Disconnect Switch

NEMA 7/9 Disconnect Switch

A NEMA 7/9 disconnect switch is recommended on fans with explosion proof motors. The NEMA 7/9 switch is designed for use with fans operating in hazardous environments. Available shipped loose for field mounting and wiring. (Not shown.)

Model BCLP

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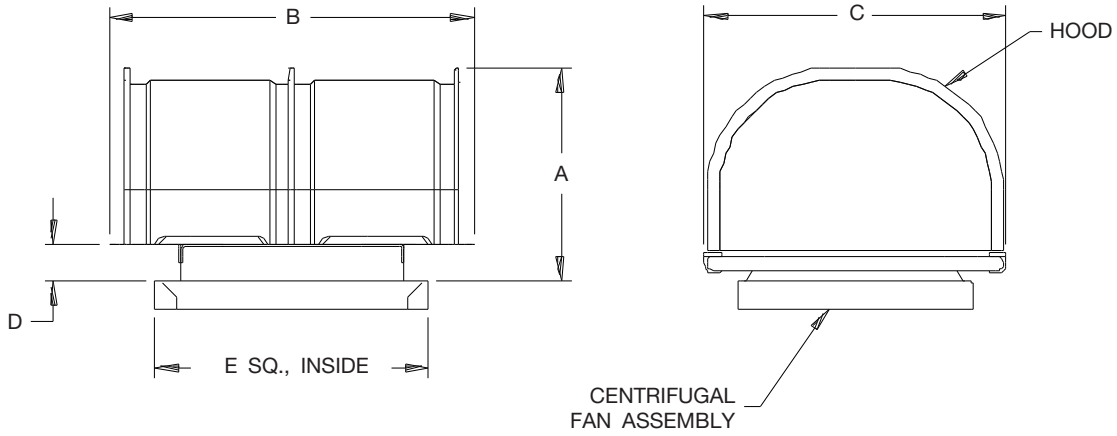
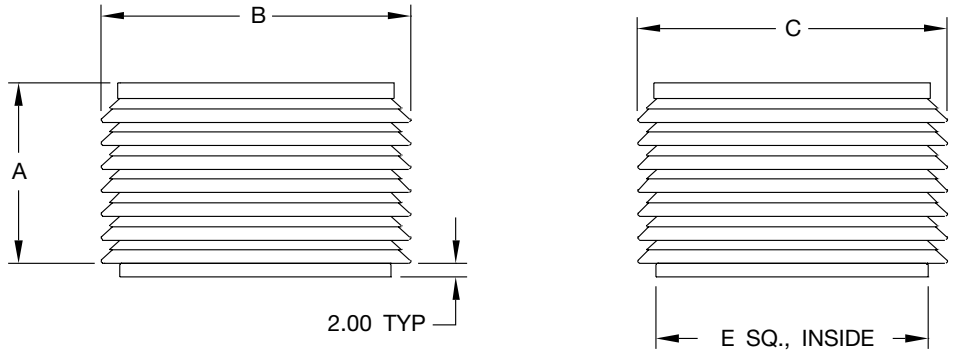
DCLH



SIZE	FAN DIMENSIONS					MAX HP	MAX FRAME	CURB DIMS.	DAMPER SIZE	AVG. SHIP WT. (LBS.)
	A MAX.	B	C	D	E. SQ.					
060	14.13	26.13	22.00	2.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	55
070	14.13	26.13	22.00	2.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	55
080	14.13	26.13	28.00	2.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	59
085	15.88	26.13	28.00	2.38	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	62
090	15.88	26.13	28.00	2.38	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	62
095	15.88	26.13	28.00	2.38	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	62
100	18.88	26.63	30.00	2.38	17.00	1/4	48	15.50 x 15.50	10.00 x 10.00	78
120	19.13	26.63	30.00	2.63	20.00	1/4	48	18.50 x 18.50	14.00 x 14.00	81

D4135-2C

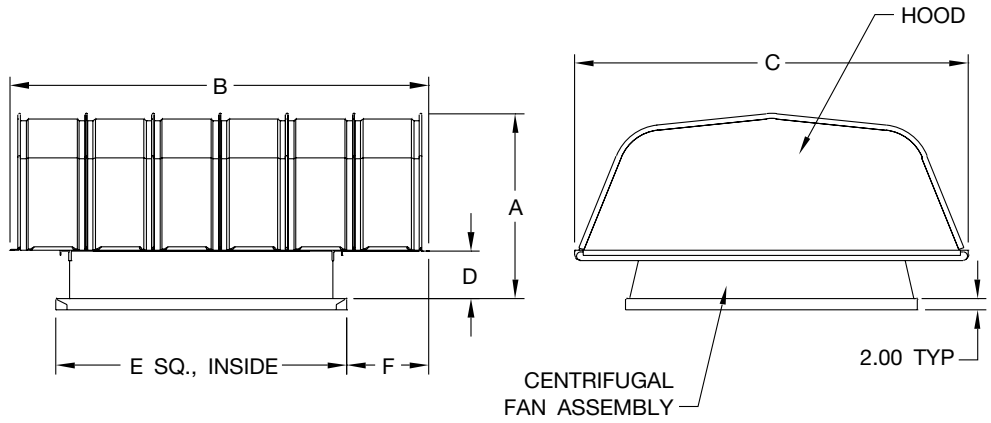
DCLP



SIZE	FAN DIMENSIONS				MAX HP	MAX FRAME	CURB DIMS.	DAMPER SIZE	AVG. SHIP WT. (LBS.)
	A MAX.	B	C	E. SQ.					
060	14.75	22.00	24.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	39
070	14.75	22.00	24.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	39
080	14.75	25.00	25.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	40
085	14.75	25.00	25.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	43
090	14.75	25.00	25.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	43
095	14.75	25.00	25.00	17.00	1/8	48	15.50 x 15.50	10.00 x 10.00	43
100	18.25	25.00	25.00	17.00	1/4	48	15.50 x 15.50	10.00 x 10.00	53
120	18.25	28.00	28.00	20.00	1/4	48	18.50 x 18.50	14.00 x 14.00	59

D4135-4D

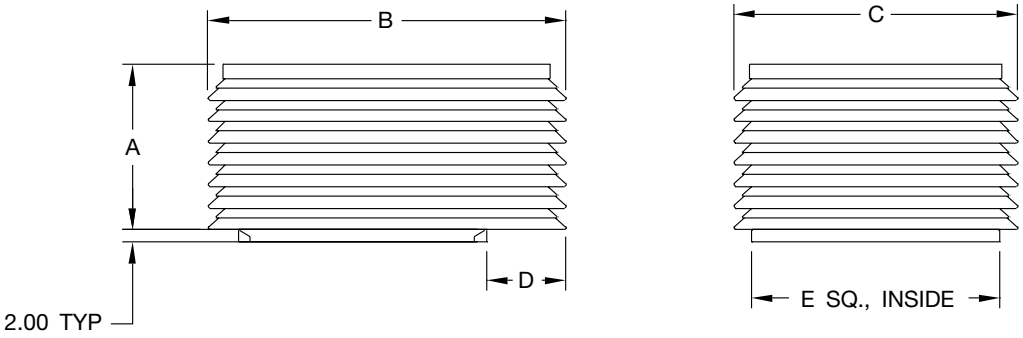
BCLH



SIZE	FAN DIMENSIONS						MAX HP	MAX FRAME	CURB DIMS.	DAMPER SIZE	AVG. SHIP WT. (LBS.)
	A MAX.	B	C	D	E. SQ.	F					
100	17.75	38.63	28.00	3.00	20.00	10.00	1/3	56	18.50 x 18.50	14.00 x 14.00	110
120	18.50	38.63	28.00	3.75	20.00	10.00	1/2	56	18.50 x 18.50	14.00 x 14.00	113
140	19.81	39.13	35.00	4.00	24.00	9.38	1	145T	22.50 x 22.50	18.00 x 18.00	126
160	20.25	39.13	35.00	4.38	26.00	9.38	1	145T	24.50 x 24.50	20.00 x 20.00	131
180	21.13	51.13	40.00	4.38	30.00	10.50	2	145T	28.50 x 28.50	24.00 x 24.00	168
210	23.13	51.13	43.00	5.00	30.00	12.00	2	184T	28.50 x 28.50	24.00 x 24.00	185
240	23.63	51.13	46.25	5.75	34.00	11.50	2	184T	32.50 x 32.50	28.00 x 28.00	203
300	26.75	63.13	52.50	5.50	40.00	11.50	5	184T	38.50 x 38.50	34.00 x 34.00	307
360	31.13	63.13	62.50	7.13	46.00	12.75	5	215T	44.50 x 44.50	40.00 x 40.00	363
420	33.25	75.13	70.63	8.50	52.00	14.75	7 1/2	215T	50.50 x 50.50	46.00 x 46.00	488
480	36.13	87.13	75.63	9.25	58.00	14.50	7 1/2	215T	56.50 x 56.50	50.00 x 50.00	555
540	43.84	87.13	85.50	10.38	64.00	17.00	15	254T	62.50 x 62.50	56.00 x 56.00	690

D4135-1D

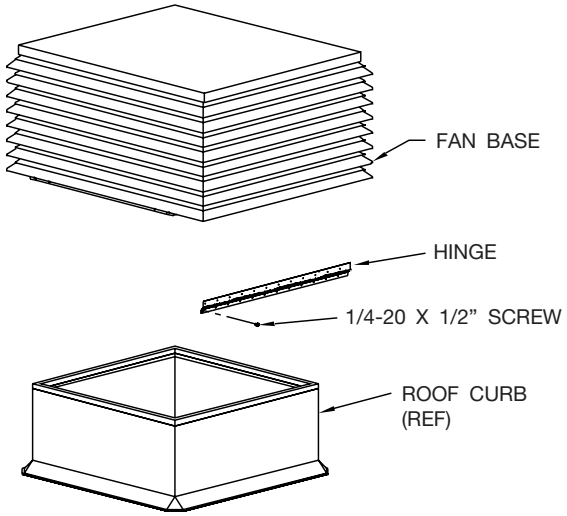
BCLP



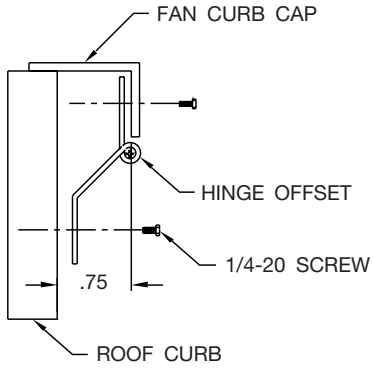
SIZE	FAN DIMENSIONS					MAX HP	MAX FRAME	CURB DIMS.	DAMPER SIZE	AVG. SHIP WT. (LBS.)
	A MAX.	B	C	D	E. SQ.					
100	19.88	38.50	28.00	12.19	20.00	1/3	56	18.50 x 18.50	14.00 x 14.00	87
120	20.63	38.50	28.00	12.19	20.00	1/2	56	18.50 x 18.50	14.00 x 14.00	89
140	20.88	40.00	32.00	11.00	24.00	1	145T	22.50 x 22.50	18.00 x 18.00	95
160	21.25	40.00	32.00	11.00	26.00	1	145T	24.50 x 24.50	20.00 x 20.00	107
180	24.50	46.00	36.00	11.00	30.00	2	145T	28.50 x 28.50	24.00 x 24.00	128
210	25.13	46.00	38.00	12.50	30.00	2	184T	28.50 x 28.50	24.00 x 24.00	138
240	29.38	49.50	42.00	11.69	34.00	2	184T	32.50 x 32.50	28.00 x 28.00	155
300	29.13	58.00	46.00	12.88	40.00	5	184T	38.50 x 38.50	34.00 x 34.00	255
360	37.75	63.75	54.75	14.25	46.00	5	215T	44.50 x 44.50	40.00 x 40.00	290
420	39.13	70.50	60.00	15.25	52.00	7 1/2	215T	50.50 x 50.50	46.00 x 46.00	380
480	43.38	76.50	66.00	15.25	58.00	7 1/2	215T	56.50 x 56.50	50.00 x 50.00	428
540	51.50	85.75	73.75	17.75	64.00	15	254T	62.50 x 62.50	56.00 x 56.00	560

D4135-3E

Curb Hinge



CURB HINGE DETAIL



	SIZE	LENGTH
DCLH/DCLP	060	15.00
	070	15.00
	080	15.00
	085	15.00
	090	15.00
	095	15.00
	100	15.00
	120	19.00
BCLH/BCLP	100	19.00
	120	19.00
	140	23.50
	160	24.50
	180	29.00
	210	29.00
	240	34.00

57962501

Notes:
1. Hinge requires curb to be 1.5" less than fan base.
2. When needed, holes can be added to base for attaching hinge.
3. Field is responsible for attaching curb hinge to roof curb and fan.

Backdraft Damper

FIG. A (NO EXTERNAL FLANGE)

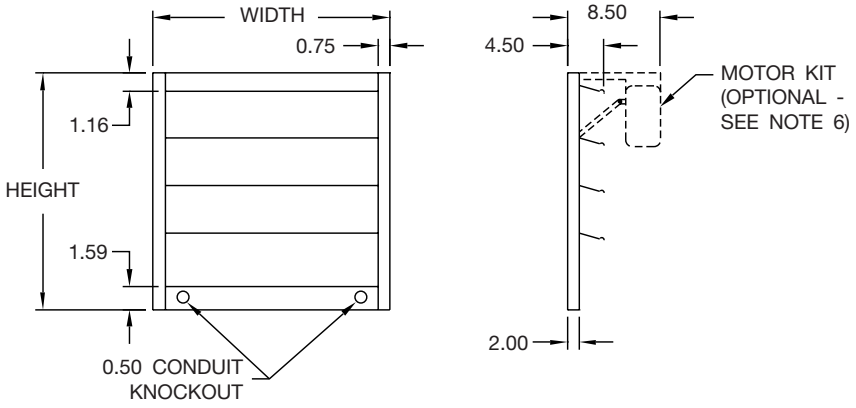
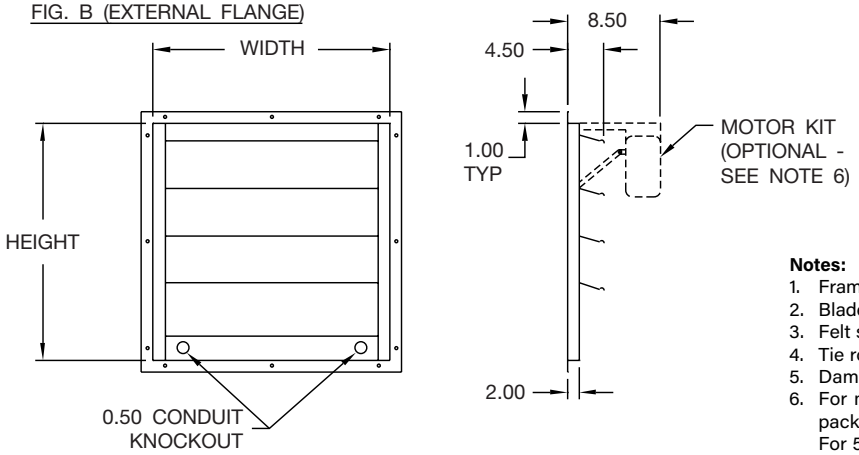


FIG. B (EXTERNAL FLANGE)

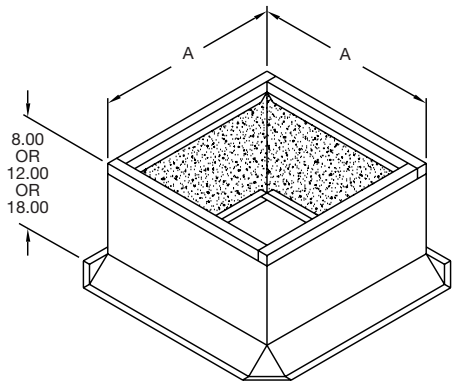


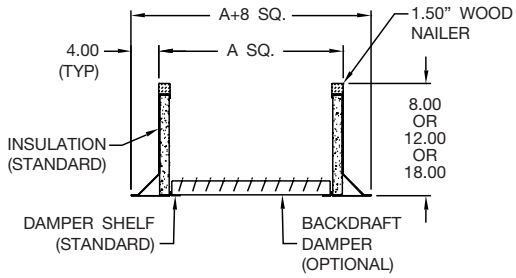
	SIZE	FIG	HEIGHT	WIDTH
DCLH/DCLP	060	A	10.00	10.00
	070	A	10.00	10.00
	080	A	10.00	10.00
	085	A	10.00	10.00
	090	A	10.00	10.00
	095	A	10.00	10.00
	100	A	10.00	10.00
	120	A	14.00	14.00
BCLH/BCLP	100	A	14.00	14.00
	120	A	14.00	14.00
	140	A	18.00	18.00
	160	A	20.00	20.00
	180	A	24.00	24.00
	210	A	24.00	24.00
	240	A	28.00	28.00
	300	A	34.00	34.00
	360	A	40.00	40.00
	420	A	46.00	46.00
	480	B	50.00	50.00
	540	B	56.00	56.00

28-145J

Notes:
1. Frame: 19-ga. galvanized steel.
2. Blades: 26-ga. mill finish aluminum.
3. Felt seal on leading edge of blades.
4. Tie rod attached to all blades.
5. Dampers individually packaged.
6. For motorized applications (opt.), 115/230, 460 and 575V motor pack available.
   For 575V applications a transformer is required.

Canted Roof Curb



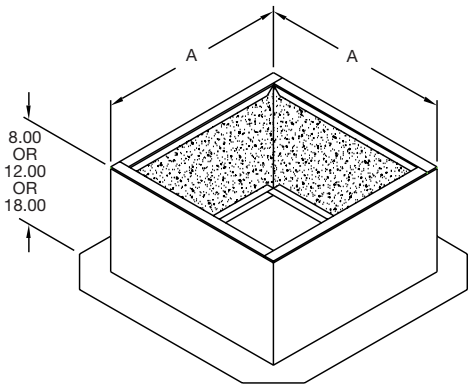


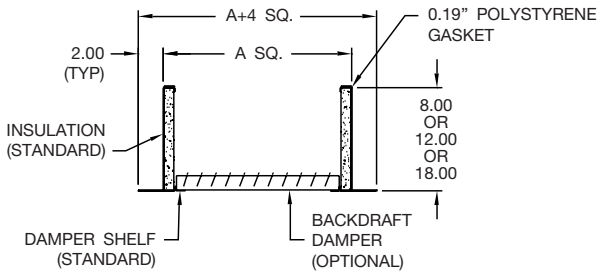
	SIZE	A. SQ.
DCLH/DCLP	060	15.50 x 15.50
	070	15.50 x 15.50
	080	15.50 x 15.50
	085	15.50 x 15.50
	090	15.50 x 15.50
	095	15.50 x 15.50
	100	15.50 x 15.50
	120	18.50 x 18.50
BCLH/BCLP	100	18.50 x 18.50
	120	18.50 x 18.50
	140	22.50 x 22.50
	160	24.50 x 24.50
	180	28.50 x 28.50
	210	28.50 x 28.50
	240	32.50 x 32.50
	300	38.50 x 38.50
	360	44.50 x 44.50
	420	50.50 x 50.50
	480	56.50 x 56.50
	540	62.50 x 62.50

RCPF

Notes:
1. Inside of curb is 3" less than Dimension 'A'.
2. Curbs are sized 1.50" less than fan base (cap) to allow .75" each side for flashing material and clearance.
3. When using a motor operated damper in the curb, a 12" high (minimum) curb is required.
4. All dimensions ±1/8".
5. Straight sided curbs have above dimensions, with wood nailer, but are built like the self-flashing curb.

Self-Flashing Roof Curb





	SIZE	A. SQ.
DCLH/DCLP	060	16.50 x 16.50
	070	16.50 x 16.50
	080	16.50 x 16.50
	085	16.50 x 16.50
	090	16.50 x 16.50
	095	16.50 x 16.50
	100	16.50 x 16.50
	120	19.50 x 19.50
BCLH/BCLP	100	19.50 x 19.50
	120	19.50 x 19.50
	140	23.50 x 23.50
	160	25.50 x 25.50
	180	29.50 x 29.50
	210	29.50 x 29.50
	240	33.50 x 33.50
	300	39.50 x 39.50
	360	45.50 x 45.50
	420	51.50 x 51.50
	480	57.50 x 57.50
	540	63.50 x 63.50

RCSF-A

Notes:
1. Inside of curb is 3" less than Dimension 'A'.
2. Curbs are sized .50" less than fan base (cap) to allow .25" each side for clearance.
3. When using a motor operated damper in the curb, a 12" high (minimum) curb is required.
4. All dimensions ±1/8".
5. Straight-sided curbs are built like above, less gasket, but have canted 'A' dimension.

Model

BCLH

Roof exhaust fans shall be of the belt driven centrifugal type, Model BCLH (Hooded) as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Models shall be cULus 705 listed.

CONSTRUCTION — Model BCLH shall be constructed of hoods with interlocking galvanized steel panels for durability and appearance. Hoods shall be hinged as standard to allow for ease of access to internal components. Units shall have a deep formed inlet venturi to prevent snow and rain entry into the building. The fan base shall include prepunched mounting holes for ease of installation and shall provide protection from weather. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

MOTOR AND DRIVE ASSEMBLY — Motor and drive assembly shall be mounted on vibration isolators to eliminate vibration and noise transmission into the ductwork.

IMPELLER — Fan impellers shall be of the centrifugal backward inclined type, containing a matching inlet venturi for optimum unit performance. Impellers shall be statically and dynamically balanced.

SHAFT — Fan shafts shall be precision-ground and polished. Shafts shall have a first critical speed of at least 125% of the fan's maximum operating speed.

BEARINGS — Bearings shall be of the one-piece, pillow block type with relubricable zerk fittings. Bearings shall be designed for air handling service with a minimum L-10 life in excess of 100,000 hours; L-50 500,000 hours at the maximum cataloged operating speed. Bearing mounting plate shall have self-aligning tabs for exact locating and alignment of bearings.

DRIVE — Drive assembly shall be constructed of heavy-gauge galvanized steel. Drives shall be sized for a minimum of 150% of driven horsepower. Machined, cast iron motor sheaves shall be adjustable for final system balance.

MOTOR — Motors shall be heavy-duty ball bearing type, closely matched to the fan load. All single-phase ODP motors shall contain thermal overload protection. All motors shall be UL and /or CSA recognized. Motor adjustment shall allow precise belt tensioning for optimum belt life and one-person adjustment and servicing.

DISCONNECT SWITCH — A NEMA 1 disconnect switch shall be supplied with wiring leading from the motor to the junction box (ODP and TEFC motors).

ACCESSORIES — When specified, accessories such as backdraft damper, roof curb, curb hinge, retaining chain, security hasp, NEMA 3R and NEMA 4 disconnect switch, two-speed switch, firestat, aluminum bird screen, aluminum insect screen and special coatings shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

Model

BCLP

Roof exhaust fans shall be of the belt driven centrifugal type, Model BCLP (Penthouse), as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Models shall be cULus 705 listed.

CONSTRUCTION — Model BCLP shall be constructed of a heavy-duty extruded aluminum louvered enclosure with mitered and welded corners. Louvered enclosures shall have an easily removable aluminum top cover for ease of access to internal components. Units shall have a deep formed inlet venturi to prevent snow and rain entry into the building. The fan base shall include prepunched mounting holes for ease of installation and shall provide protection from weather. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

MOTOR AND DRIVE ASSEMBLY — Motor and drive assembly shall be mounted on vibration isolators to eliminate vibration and noise transmission into the ductwork.

IMPELLER — Fan impellers shall be of the centrifugal backward inclined type, containing a matching inlet venturi for optimum unit performance. Impellers shall be statically and dynamically balanced.

SHAFT — Fan shafts shall be precision-ground and polished. Shafts shall have a first critical speed of at least 125% of the fan's maximum operating speed.

BEARINGS — Bearings shall be of the one-piece, pillow block type with relubricable zerk fittings. Bearings shall be designed for air handling service with a minimum L-10 life in excess of 100,000 hours; L-50 500,000 hours at the maximum cataloged operating speed. Bearing mounting plate shall have self-aligning tabs for exact locating and alignment of bearings.

DRIVE — Drive assembly shall be constructed of heavy-gauge galvanized steel. Drives shall be sized for a minimum of 150% of driven horsepower. Machined, cast iron motor sheaves shall be adjustable for final system balance.

MOTOR — Motors shall be heavy-duty ball bearing type, closely matched to the fan load. All single-phase ODP motors shall contain thermal overload protection. All motors shall be UL and /or CSA recognized. Motor adjustment shall allow precise belt tensioning for optimum belt life and one-person adjustment and servicing.

DISCONNECT SWITCH — A NEMA 1 disconnect switch shall be supplied with wiring leading from the motor to the junction box (ODP and TEFC motors).

ACCESSORIES — When specified, accessories such as backdraft damper, roof curb, curb hinge, retaining chain, security hasp, NEMA 3R and NEMA 4 disconnect switch, two-speed switch, firestat, aluminum bird screen, aluminum insect screen and special coatings shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

Model

DCLH

Roof exhaust fans shall be of the direct drive centrifugal type, Model DCLH (Hooded), as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Models shall be cULus 705 listed.

CONSTRUCTION — Model DCLH shall be constructed of hoods with interlocking galvanized steel panels for durability and appearance. Hoods shall be hinged as standard to allow for ease of access to internal components. Units shall have a deep formed inlet venturi to prevent snow and rain entry into the building. The fan base shall include prepunched mounting holes for ease of installation and shall provide protection from weather. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

MOTOR ASSEMBLY — Motor assembly shall be mounted on vibration isolators to eliminate vibration and noise transmission into the ductwork.

IMPELLER — Fan impellers shall be of the centrifugal backward inclined type, containing a matching inlet venturi for optimum unit performance. Impellers shall be statically and dynamically balanced.

MOTOR — Motors shall be heavy-duty ball bearing type, closely matched to the fan load. All single-phase ODP motors shall contain thermal overload protection. All motors shall be UL and /or CSA recognized. Motors for use with speed control shall provide good speed controllability without any objectionable noise.

DISCONNECT SWITCH — A NEMA 1 disconnect switch shall be supplied with wiring leading from the motor to the junction box (ODP and TEFC motors).

ACCESSORIES — When specified, accessories such as backdraft damper, roof curb, curb hinge, retaining chain, security hasp, variable speed controller, NEMA 3R, 4 disconnect switch, two-speed switch, firestat, aluminum bird screen, aluminum insect screen and special coatings shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical and horizontal directions. Records shall be maintained and a written copy shall be available upon request.

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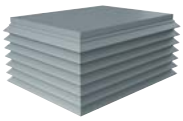

Model

DCLP

Roof exhaust fans shall be of the direct drive centrifugal type, Model DCLP (Penthouse), as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Models shall be cULus 705 listed.

CONSTRUCTION — Model DCLP shall be constructed of a heavy-duty extruded aluminum louvered enclosure with mitered and welded corners. Louvered enclosures shall have an easily removable aluminum top cover for ease of access to internal components. Units shall have a deep formed inlet venturi to prevent snow and rain entry into the building. The fan base shall include prepunched mounting holes for ease of installation and shall provide protection from weather. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

MOTOR ASSEMBLY — Motor assembly shall be mounted on vibration isolators to eliminate vibration and noise transmission into the ductwork.

IMPELLER — Fan impellers shall be of the centrifugal backward inclined type, containing a matching inlet venturi for optimum unit performance. Impellers shall be statically and dynamically balanced.

MOTOR — Motors shall be heavy-duty ball bearing type, closely matched to the fan load. All single-phase ODP motors shall contain thermal overload protection. All motors shall be UL and /or CSA recognized. Motors for use with speed control shall provide good speed controllability without any objectionable noise.

DISCONNECT SWITCH — A NEMA 1 disconnect switch shall be supplied with wiring leading from the motor to the junction box (ODP and TEFC motors).

ACCESSORIES — When specified, accessories such as backdraft damper, roof curb, curb hinge, retaining chain, security hasp, variable speed controller, NEMA 3R, 4 disconnect switch, two-speed switch, firestat, aluminum bird screen, aluminum insect screen and special coatings shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical and horizontal directions. Records shall be maintained and a written copy shall be available upon request.

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