



**ROOF CURBS** | Prefabricated Curbs

# General Information & Accessories

## Roof Curbs

---

Prefabricated curbs offer many advantages over field built curbs for roof mounted ventilating equipment. PennBarry was the first manufacturer to recognize this fact and provide roof curbs as part of its product line. By using PennBarry curbs with PennBarry fans and vents you are assured a proper fit with PennBarry roof mounted equipment. PennBarry curbs eliminate field guessing. There are too many headaches on a job site. Eliminate one potential problem by matching PennBarry fans and vents with PennBarry roof curbs.

- PennBarry roof curbs assure a tightly sealed roof through stable design and integral flashing
- Factory-built curbs provide for consistent termination of the duct system
- As the single source, “one-stop-shop” for curbs and fans, PennBarry can coordinate orders for shipment or early release the curb portion to allow close-in of the roof
- Various curb heights are available
- Standard configurations are canted, cantless, raised cant or self-flashing curb designs
- Sturdy wood-nailers are standard (except on SF curbs) and provide an ideal surface for positive mechanical fastening of PennBarry fan or vent and roofing paper
- Heavy 18 gauge galvanized steel or all aluminum construction is available
- Liquid tight, continuously-welded corner seams
- Rigid, 1 1/2" thick, 3 lb. glass fiber insulation attenuates sound and eliminates condensation
- Wide range of special construction and options include ventilated curbs, full metal liners, burglar bars, gasketing and more

### Standard Curb Descriptions and Construction Features

The **UNIBEAM** is the most economical prefabricated curb. Costs are similar or less than field-built wood or concrete curbs. Unibeams are fabricated of galvanized steel or aluminum and incorporate fully welded seams. Three configurations are available: 1) A cant strip built-in to facilitate placement of roofing paper or membranes for non-insulated roof decks; 2) A raised cant for decks with rigid insulation; and 3) A straight-wall for decks with lightweight fill, single-ply roofing or tapered insulation. All Unibeams come with a wood nailer to facilitate the securing of roofing felts and the mounting of the fan or ventilator. 1 1/2" thick, rigid insulation is standard providing thermal protection and sound attenuation.

The **SF** is a “self-flashing” prefabricated curb. A generous 3" curb fastening flange is provided to tie the curb into the roof deck. This design simplifies installation by eliminating the need for securing roofing papers up and onto the side of the curb wall. Roofing materials need only cover the flange. Accordingly, a wood nailer is not required but is available as an option. Closed-cell neoprene rubber gasketing is standard around the top of the curb. SF curbs are fully welded and available in galvanized steel or aluminum. 1 1/2" thick, rigid insulation is standard providing thermal protection and sound deadening.

## Special Curb and Accessories

### Food Service Installations

PennBarry offers a variety of curb and exhaust fans for use as a major component of the ventilation systems for commercial and institutional cooking equipment. Designs must frequently adhere to publication NFPA-96 (check local and state municipal codes). NFPA-96 requires that duct work extend a minimum of 18" above the roof surface. Furthermore, if duct work terminates into the base of an upwards discharge exhaust fan, there must be at least 40" of clearance between the exhaust fan discharge and the roof surface. PennBarry can supply curb heights and exhaust fans which conform to NFPA-96.

In addition, some building codes require the use of ventilated mounting curbs or ventilated pedestals to assure clearances are maintained between hot ducts and combustible building materials. These devices, available in different heights, provide an approved arrangement for connecting the range hood and duct work to the roof fan. The use of a ventilated curb or ventilated pedestal permits the duct to pass through the roof opening and fasten to the curb without the hot exhaust duct contacting other parts of the building or roof members. Flanged duct sections can be inserted through the curb or pedestal from the top side for easy installation. Insulation is not provided on ventilated curbs. The ventilated curb is available in galvanized steel with an 18" height. Specify the UNIBEAM VENTILATED CURB or VENTILATED PEDESTAL.

### Sound Attenuation

Specifications often call for sound curbs or sound attenuating curbs. Operational sound is a fact of life for any roof fan, regardless of how expertly engineered or finely balanced. Curb mounted insulation helps absorb percentages of this sound. Insulation also mitigates outside noise coming into buildings. All PennBarry roof curbs attenuate sound. The standard UNIBEAM and SF curb designs provide adequate sound attenuation for most installations. For those instances where maximum sound attenuation is essential, a special sound absorbing insulation matrix can be provided in any UNIBEAM curb configuration with a special 16" height. Specify the ULTRA SONOTROL UNIBEAM CURB.

### Single and Double Pitch Mounting

All PennBarry curbs are available for installation on pitched surfaces. Providing the slope of the roof will assure an accurate match between roof curb and roof deck.

### Metal Liners

Full metal liners are available for all designs except the ventilated curb. Liners are specified when exhaust air is corrosive or it is desirable or required to separate the insulation from the exhaust or supply air.

# Accessories & Dimensional Data

## Roof Curbs

### Burglar Bars

When increased building security is a requirement, factory installed steel burglar bars can be supplied. Steel rods can be 1/2", 5/8" or 3/4" diameter. They are welded in place to form 6" on center squares.

### Hinged Sub-Base

Hinged sub-bases provide easy access to dampers or for inspecting ductwork. A rust-resistant hinge arrangement permits unrestricted service amaintenance in the curb well. This base is available for all small and medium sized fans and ventilators.

### Mounting Pedestal

A mounting pedestal, with removable access panel, provides the most effective means for inspection, cleaning or servicing backdraft dampers. It provides solid ventilator support and a tight seal that does not disturb the roof curbs or flashing.

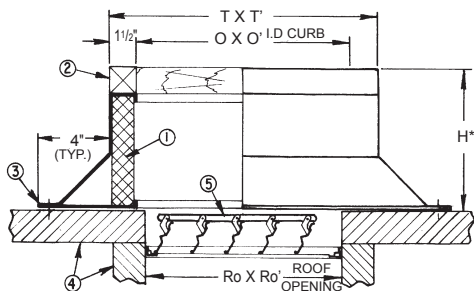
## Dimensional Data

**Ro: Roof Opening** – For gravity ventilators the Ro dimension should equal the throat dimension of the ventilator for maximum air flow. Refer to appropriate engineering bulletin.

**T: Throat** – The standard T dimension is 1 1/2" less than the overall dimension of the device to be mounted on the curb to assure that the curb fits into the base of the device. For SF Curb T dimension is 1/2" less than the overall dimension of the device to be mounted. Inside dimension of curb opening is 3" less than T dimension.

**H: Height** – Specify height required for each curb. Standard heights are 8", 12", 16" and 18". When motorized dampers are required the curb height must be 12" minimum.

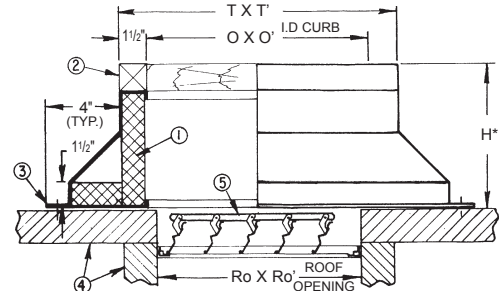
### Unibeam Curb with Cant Strip



#### LEGEND

- |   |                                |
|---|--------------------------------|
| 1. 1 1/2" 3lb. Density Rigid<br>Fiberglass Insulation | 3. Curb Fastening Flange       |
| 2. Wood Nailers                                       | 4. Roof Structure - By Others  |
|   | 5. Backdraft Damper - Optional |

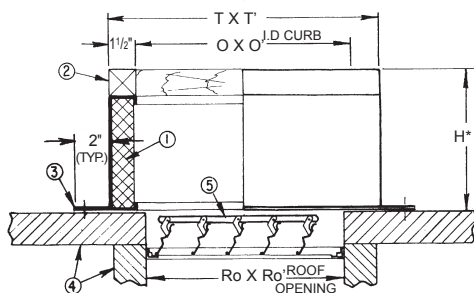
### Unibeam Curb with Raised Cant



#### LEGEND

- |   |                                |
|---|--------------------------------|
| 1. 1 1/2" 3lb. Density Rigid<br>Fiberglass Insulation | 3. Curb Fastening Flange       |
| 2. Wood Nailers                                       | 4. Roof Structure - By Others  |
|   | 5. Backdraft Damper - Optional |

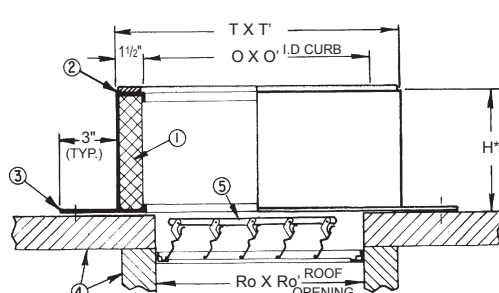
### Unibeam Curb Straight Wall - Cantless



#### LEGEND

- |   |                                |
|---|--------------------------------|
| 1. 1 1/2" 3lb. Density Rigid<br>Fiberglass Insulation | 3. Curb Fastening Flange       |
| 2. Wood Nailers                                       | 4. Roof Structure - By Others  |
|   | 5. Backdraft Damper - Optional |

### SF Curb Self-Flashing



#### LEGEND

- |   |                                |
|---|--------------------------------|
| 1. 1 1/2" 3lb. Density Rigid<br>Fiberglass Insulation | 3. Curb Fastening Flange       |
| 2. Neoprene Rubber Gasket                             | 4. Roof Structure - By Others  |
|   | 5. Backdraft Damper - Optional |

# Quick Reference Curb Chart

## Roof Curbs

NOMINAL "T" DIMENSION		DOMEX	FUMEX	LC DYNAFAN	LINEA	LVQ DYNAFAN	MUFFAN
VENTED	UNIBEAMS						
13.5	13.5						
14	14						
14.75	14.75						
16	16						
16.75	16.75						
17	17	DX06R, DX08S/R, DX10S/R, DX11SR/Q, DX13VSR/Q, DX06B, 08B	FX08SR, FX10SR, FX11VSR/Q, FX13VSR/Q	LC06VSR	LF06VC	HA06BC, HA08VSC, HA10SC, HA11VSRQ1C, HA13VSRQC	
19	19	DX16VSR/Q, DX11B	FX16VSR/Q	LC12VSR	LF12VSR	HA11BC, HA16BC, HA16VSR, Q1,Q2C	
19.5	19.5						
20.5	20.5						
21	21						MU3010
23.25	23.25	DX12B, 14B	FX08B, 10B, 13B, 14B, 12BH, 13BH			HA12BC	
23.5	23.5						MU10V, MU10R
24	24						
24.5	24.5						
26	26						MU4012, MU4015
27	27	DX16B, DX18B, DX18V	FX16B, FX18B, FX18V, FX18BH	LC20BC	LF20BC	HA18BC	
29.5	29.5						MU5018
30.5	30.5						
32	32	DX24B	FX24B, 24BH	LC24BC	LF24BC	HA24BC	
33.5	33.5						
34.5	34.5			LC30BC	LF30BC		
35	35	DX30B	FX30B				
37	37						
38.5	38.5						
39.5	39.5						
40.5	40.5						
41.5	41.5						MU20, MU30
42.5	42.5						
43	43	DX36B	FX36B	LC40BC	LF40BC		
45.5	45.5						
46.5	46.5						
47.5	47.5						
49	49						
51	51	KB420					
51.5	51.5						
52.5	52.5						
55	55						
56.5	56.5						MU6020
57	57		FMX50B				
57.5	57.5	JB48					
58.5	58.5						
62	62	MB542					
63.5	63.5						
64.5	64.5						
65	65						
66	66						
69.5	69.5						
70.5	70.5						
81.5	81.5						
82.5	82.5						
94.5	94.5						

Following publication of this catalog changes may have been made in standard equipment, options and the like that would not be included. We reserve the right to make changes at any time, without notice, to models, specifications, options, availability, etc. This bulletin illustrates the appearance of PennBarry products at the time of publication and we reserve the right to make changes in design and construction at anytime without notice. Your local sales representative is the best source for current information.

# Quick Reference Curb Chart (cont.)

## Roof Curbs

NOMINAL "T" DIMENSION		POWERED AIRETTE		DOMEX AXIAL		HI-EX			WEATHER CAP WCC
VENTED	UNIBEAMS	AC	AF	DAE	DAS	HC, HF, HX	HS	HZ	
13.5	13.5								06
14	14								
14.75	14.75			DAE08					
16	16								
16.75	16.75			DAE12					
17	17								08, 10
19	19								12
19.5	19.5			DAE14	DAS14				
20.5	20.5								
21	21								
23.25	23.25								14, 16
23.5	23.5								
24	24								
24.5	24.5			DAE18	DAS18				
26	26								
27	27								18, 20
29.5	29.5								
30.5	30.5								
32	32						24		24
33.5	33.5	24, 24T, 24W1, 24W2	24, 24T, 24W1, 24W2						
34.5	34.5					24		24	
35	35								30
37	37						30		
38.5	38.5								
39.5	39.5	30, 30T1, 30T2, 30W	30, 30T1, 30T2, 30W						
40.5	40.5					30		30	
41.5	41.5								
42.5	42.5								
43	43	36, 36W1, 36W2	36, 36W				36		36
45.5	45.5								
46.5	46.5					36		36	
47.5	47.5								
49	49						42		
51	51								42
51.5	51.5	42, 42W1, 42W2	42, 42W1, 42W2						
52.5	52.5					42		42	
55	55						48		
56.5	56.5								
57	57								
57.5	57.5	48, 48W1, 48W2	48, 48W1, 48W2						48
58.5	58.5					48		48	
62	62								
63.5	63.5	54	54						
64.5	64.5					54	54	54	
65	65								
66	66								
69.5	69.5	60	60						
70.5	70.5					60	60	60	
81.5	81.5	72							
82.5	82.5					72		72	
94.5	94.5								

# OTHER PENNBARRY PRODUCTS

## CENTRIFUGAL PRODUCTS



**Domex**  
Centrifugal  
Roof Exhausters



**Fumex Fatrap**  
Kitchen Hood Centrifugal  
Roof Exhausters



**Zephyr**  
Ceiling and Inline Fans



**Dynamo**  
Centrifugal Blowers



**Centrex Inliner**  
Centrifugal Inline Fans



**LC Dynafan**  
Low Contour Centrifugal  
Roof Exhausters

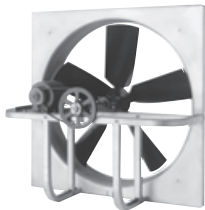


**ESI**  
Efficient Silent  
Inline Fan



**Fume Exhaust**  
Curb Mounted  
Centrifugal Fans

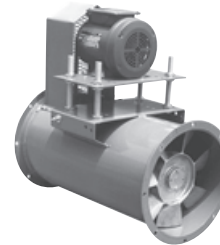
## AXIAL / GRAVITY PRODUCTS



**Breezeway**  
Propeller Wall Fans



**HI-EX**  
Power Roof Ventilator



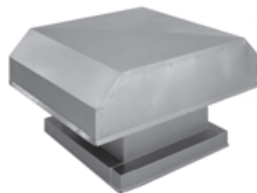
**Tubeaxial**  
Inline Fans



**Vaneaxial**  
Inline Fans



**Powered Airette**  
Axial Roof Ventilators



**Airette**  
Gravity Intake/Relief Hood



**Domex Axial**  
Axial Roof Ventilators



**Axcenrix**  
Bifurcator Fan

For more information contact your local PennBarry Sales  
Manufacturer Representative or visit us at [www.PennBarry.com](http://www.PennBarry.com)