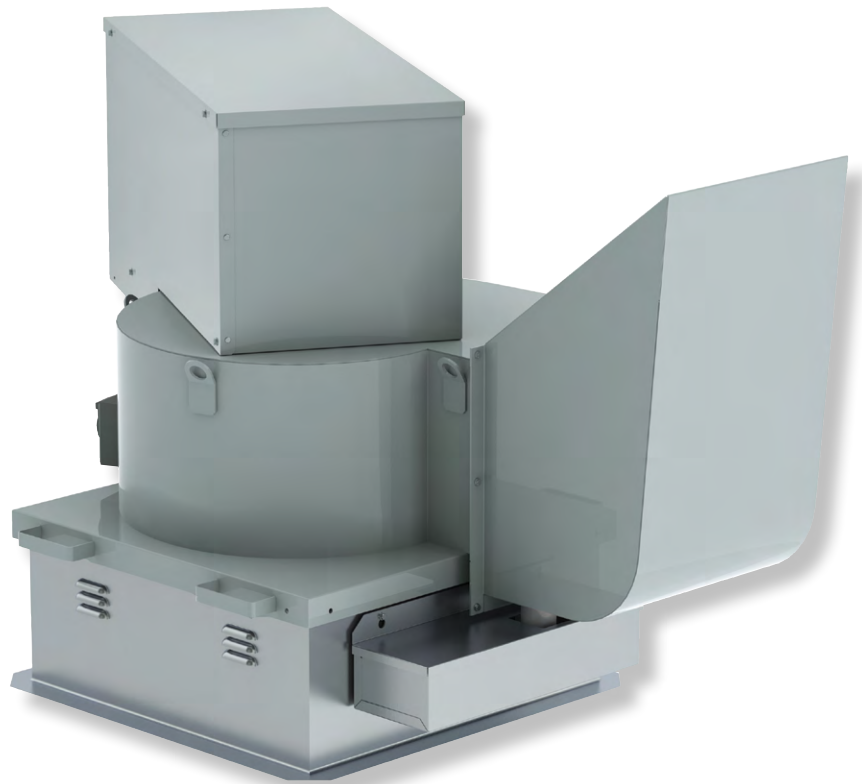


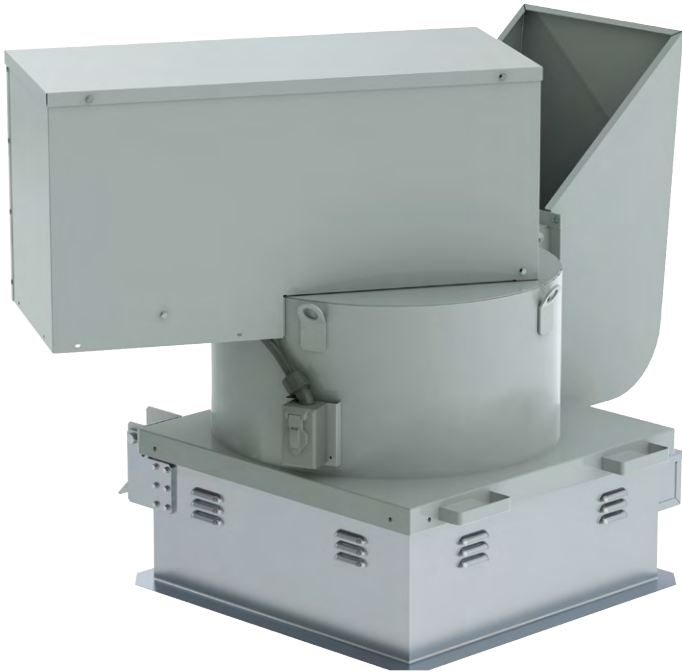


INDUSTRIAL PROCESS AND  
COMMERCIAL VENTILATION SYSTEMS

# BELT DRIVEN HINGED RESTAURANT EXHAUST FANS

MODEL BHRE





## Model BHRE

### Hinged Restaurant Exhaust Fans

Twin City Fan's belt driven hinged rooftop exhaust fan, model BHRE, is designed specifically for roof mounted applications handling grease laden air and elevated temperatures from kitchens, restaurants, cooking and dishwasher hoods. The compact, low profile design hinges on the roof curb to provide easy access for cleaning and maintenance of the unit.

BHRE fans feature fully welded, non-overloading backward inclined centrifugal wheels designed for maximum efficiency and quiet operation. All wheels are statically and dynamically balanced. Units are manufactured under strict quality assurance standards to ensure catalogued performance and years of trouble-free operation.

#### Capabilities

BHRE fans are available in 9 sizes, ranging from 10.5" through 24.50" wheel diameters. Performance capabilities include a broad capacity range from 300 to 9,000 CFM and static pressure capabilities up to 5 inches w.g. The BHRE is capable of handling airstream temperatures of 400°F continuous.

#### Sizes

10.5" to 24.50" wheel diameters

#### Performance

Airflow to 9,000 CFM

Static pressure to 5 inches w.g.

#### Drive Configuration

Available in belt driven configuration



Model BHRE is UL/cUL 705 listed for electrical, File No. E158680. Model BHRE is UL/cUL 762 listed for the exhaust of grease-laden air, File No. E158680.



Twin City Fan & Blower certifies that the Model BHRE Hinged Restaurant Exhaust Fans 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 AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. See Twin City Fan & Blower Fan Selector® Program for sound ratings.

## Housing

Housing is constructed of heavy gauge steel and is continuously welded on top and bottom to prevent grease leakage. Lifting lugs are welded to the housing as standard.

## Drive Assembly

Adjustable pitch V-belt drives with cast iron sheaves and heat resistant belts are selected at 150% of the driven motor horsepower.

## Discharge Scoop

The discharge scoop is sealed to the fan housing with a high temperature gasket to prevent grease leakage onto the roof. It can be easily removed for cleaning and maintenance. A 2" NPT drain is welded to the bottom of the scoop to allow for grease to be collected in a grease trough or piped and collected at remote location (local codes may vary).

## Motor Cover

Encloses the motor, drives and bearings from the elements. Vents allow ambient air in to cool motor, drives and bearings. The top panel of the motor cover is removed with simple hand tools for maintenance and inspection of motor and drive components.

## Curb Cap

The curb cap is constructed of heavy gauge steel and is continuously welded. Mounting holes in the curb cap are prepunched to ensure correct attachment to the roof curb. A curb hinge is provided as standard. Curb caps are complete with stops at the corners to prevent over rotation and handles to assist with lifting.

## Disconnect Switch

Standard on all units. Fans are provided with a NEMA-3R type disconnect switch mounted to the outside of the fan housing. Switches are prewired from the motor.

## Drive Frame

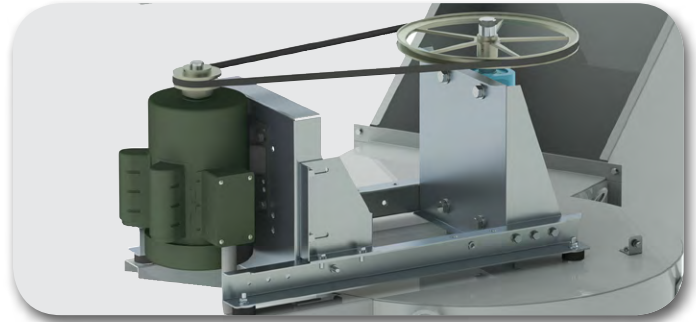
Vibration isolators support and isolate the motor, shaft, bearings and wheel assembly from the unit, reducing noise transmission into the ductwork.

## Wheel

Backward inclined wheel is non-overloading and constructed of heavy gauge steel. Wheel is fully welded and includes fins on the backplate to draw cool air across the motor, drives and bearings.

## Bearings

Heavy duty grease lubricated pillow block bearings complete with zerk fittings for simple and easy lubrication. Bearings have been selected to have an L-10 life in excess of 100,000 hours.



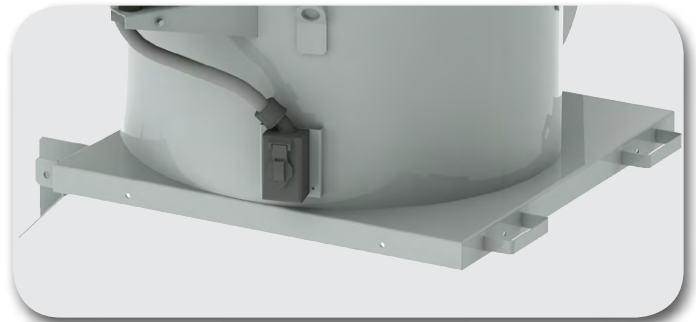
Drive Assembly



Motor Cover



Discharge Scoop



Curb Cap & NEMA-3R Disconnect Switch





Grease Box

## Scroll Access Door

A bolted access door on the fan scroll is available to provide access to the wheel for cleaning and inspection. A high temperature gasket seals the access door to the scroll.

## Grease Box

The heavy gauge galvanized grease box is designed to trap the grease in and allow the water to run off onto the roof.

## Auto Belt Tensioner

The auto belt tensioner keeps constant tension on the belt which reduces slippage and extends belt life. Available with single-groove drives only.

## NEMA-4 Weatherproof Disconnect Switches

A NEMA-4, water and dust tight disconnect is available mounted and prewired from the motor.

## Vented Curb Extension

Extensions work to extend the height of the roof curb and fan discharge. Extensions are sized to meet NFPA discharge height requirements of 40" above the roof with an 12" tall roof curb. Standard curb extension is galvanized steel.

## Extended Discharge

For applications where it is required to increase the discharge height of the unit due to local codes or close proximity to the inlets of supply units, an extended discharge is available. On fan sizes 150 and above, an access door on the top of the fan housing is standard to provide access to the inside of the housing for cleaning.

## Prefabricated Roof Curbs

Prefabricated roof curbs are available in heavy duty galvanized steel or aluminum construction, in heights of 8", 12", or 18". The standard curb (vented self flashing) is provided with a 3/16" polystyrene gasket. The standard self flashing curb design features 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.

## Special Coatings

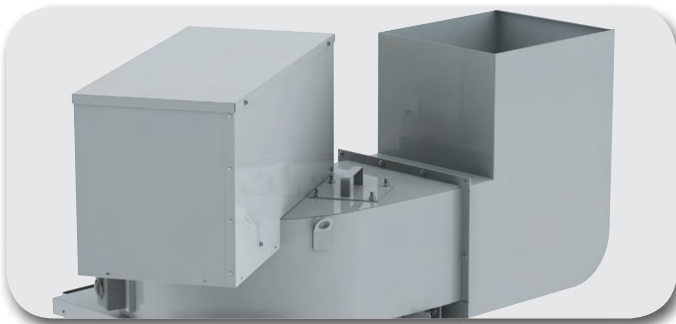
Available coatings include air-dried enamel, air-dried epoxy, and Heresite (air-dried phenolic). Contact your Twin City Fan & Blower representative for more information on available coatings and colors.



NEMA-4 Disconnect Switch



Prefabricated Roof Curbs



Extended Discharge

## Swingout Wheel Design

Available as an optional construction, the swingout wheel design allows for the wheel to pivot out of the fan housing for simple cleaning and maintenance. A rod prop is standard with the swingout wheel option to keep the assembly open as well as a lockable hasp. See page 5 for more details on the swingout wheel option.



## BHRE Swingout Wheel

*Swingout wheel assembly is sealed to fan housing with high temperature gasketing*

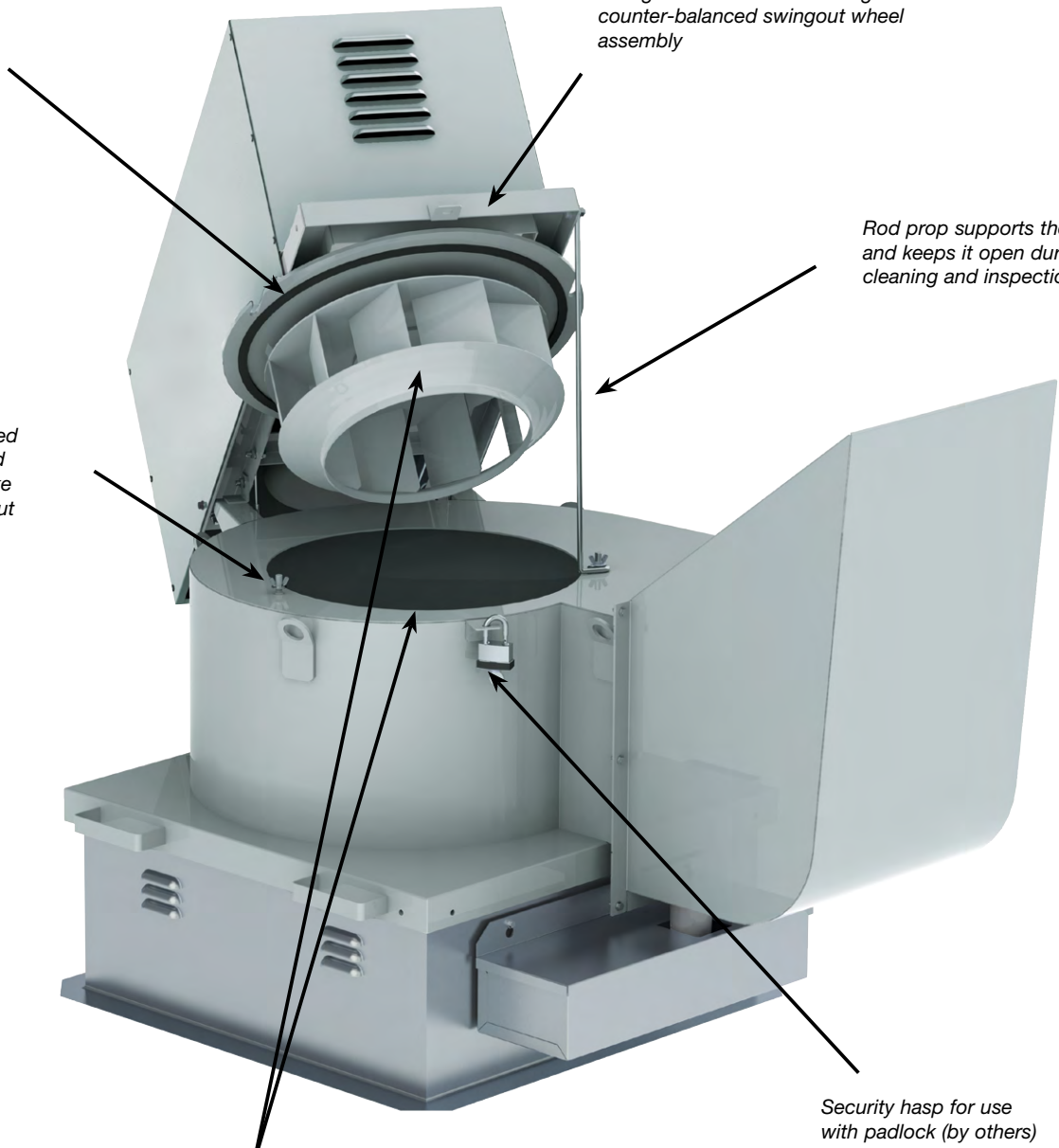
*Lifting handle assists in raising the counter-balanced swingout wheel assembly*

*Rod prop supports the wheel and keeps it open during cleaning and inspection*

*Swingout wheel is secured to fan housing on welded studs, and wingnuts make for simple removal without the need for hand tools*

*Security hasp for use with padlock (by others)*

*Complete access to wheel and inside of fan housing for cleaning*



**Size 105**

Wheel Diameter: 10.50"

Outlet Area: 0.65 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
261	400	874	0.02	1150	0.04	1581	0.08																
392	600	1032	0.03	1258	0.06	1642	0.11	1960	0.18	2241	0.25	2496	0.32										
522	800	1220	0.05	1417	0.08	1747	0.15	2041	0.22	2301	0.30	2538	0.39	2759	0.48	2966	0.57	3162	0.67	3348	0.77		
653	1000	1431	0.08	1597	0.12	1894	0.19	2153	0.28	2396	0.37	2619	0.46	2826	0.56	3022	0.67	3207	0.78	3385	0.89	3554	1.01
784	1200	1653	0.13	1797	0.17	2065	0.25	2300	0.35	2517	0.44	2725	0.55	2922	0.66	3107	0.77	3283	0.89	3451	1.01	3613	1.14
914	1400	1879	0.19	2009	0.23	2245	0.33	2467	0.43	2667	0.54	2854	0.65	3036	0.77	3212	0.90	3381	1.02	3542	1.16		
1045	1600	2111	0.26	2229	0.32	2442	0.42	2645	0.53	2835	0.65	3011	0.78	3176	0.91	3338	1.04	3496	1.18	3650	1.32		
1175	1800	2344	0.36	2452	0.42	2648	0.53	2831	0.65	3010	0.79	3179	0.92	3336	1.06	3486	1.20	3631	1.35				
1306	2000	2582	0.48	2680	0.54	2863	0.67	3031	0.80	3195	0.94	3355	1.09	3507	1.24	3651	1.39						
1437	2200	2821	0.62	2912	0.69	3082	0.83	3240	0.98	3390	1.12	3539	1.28										
1567	2400	3061	0.79	3145	0.87	3304	1.02	3452	1.18	3593	1.33												
1698	2600	3303	1.00	3381	1.08	3530	1.24	3671	1.41														

**Size 122**

Wheel Diameter: 12.25"

Outlet Area: 0.86 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
344	400	719	0.02																				
516	600	836	0.04	1034	0.07																		
688	800	990	0.07	1149	0.10	1438	0.19	1703	0.29														
860	1000	1152	0.10	1296	0.15	1543	0.24	1771	0.35	1984	0.47	2195	0.60										
1032	1200	1323	0.16	1454	0.21	1671	0.31	1876	0.43	2067	0.56	2246	0.70	2423	0.85	2599	1.01						
1204	1400	1501	0.23	1617	0.28	1821	0.41	1999	0.53	2174	0.67	2341	0.82	2498	0.97	2650	1.14	2802	1.32	2953	1.50	3103	1.70
1376	1600	1684	0.32	1787	0.38	1979	0.52	2142	0.66	2298	0.81	2451	0.96	2600	1.13	2741	1.30	2877	1.48	3010	1.67	3142	1.87
1548	1800	1870	0.43	1962	0.50	2140	0.66	2297	0.82	2438	0.97	2576	1.14	2713	1.31	2847	1.49	2977	1.68	3101	1.88		
1720	2000	2058	0.57	2142	0.65	2304	0.82	2456	1.00	2591	1.17	2717	1.35	2841	1.53	2965	1.72	3087	1.92				
1892	2200	2248	0.75	2324	0.83	2473	1.02	2617	1.21	2749	1.40	2869	1.59	2983	1.78	3096	1.98						
2064	2400	2439	0.95	2509	1.04	2646	1.24	2781	1.45	2909	1.66	3026	1.87	3135	2.08								
2236	2600	2630	1.19	2696	1.29	2823	1.50	2948	1.72	3070	1.95												

**Size 135**

Wheel Diameter: 13.50"

Outlet Area: 1.04 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
418	400	653	0.03																				
626	600	758	0.05	938	0.08																		
835	800	898	0.08	1042	0.12	1305	0.22	1546	0.35														
1044	1000	1045	0.12	1175	0.18	1400	0.29	1607	0.42	1800	0.57	1992	0.73										
1253	1200	1200	0.19	1320	0.25	1516	0.38	1702	0.52	1876	0.68	2038	0.85	2199	1.03	2358	1.23						
1462	1400	1362	0.27	1467	0.35	1652	0.49	1814	0.65	1973	0.81	2124	0.99	2267	1.18	2405	1.39	2542	1.60	2679	1.82	2815	2.06
1670	1600	1527	0.38	1620	0.46	1795	0.63	1943	0.80	2084	0.98	2224	1.17	2358	1.37	2487	1.58	2610	1.80	2731	2.03	2851	2.28
1879	1800	1696	0.52	1780	0.61	1941	0.80	2084	0.99	2212	1.18	2337	1.38	2461	1.59	2583	1.81	2700	2.04	2813	2.28		
2088	2000	1867	0.70	1943	0.79	2090	1.00	2228	1.21	2351	1.42	2465	1.64	2577	1.85	2690	2.09	2800	2.32				
2297	2200	2039	0.90	2108	1.01	2243	1.23	2374	1.47	2494	1.70	2603	1.93	2706	2.16	2808	2.40						
2506	2400	2212	1.15	2276	1.27	2401	1.51	2523	1.76	2639	2.02	2746	2.27	2844	2.52								
2714	2600	2386	1.44	2445	1.57	2560	1.82	2674	2.09	2785	2.37												

Maximum outlet velocity for restaurant applications is 1800 fpm.  
 Performance certified is for installation Type A: free inlet, free outlet.  
 Power rating (BHP) does not include transmission losses.  
 Performance ratings include the effects of a discharge scoop.

**Size 150**

Wheel Diameter: 15.00"

Outlet Area: 1.29 ft<sup>2</sup>

Fan Efficiency Grade = FEG67

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
516	400	587	0.03																				
773	600	682	0.06	844	0.10																		
1031	800	808	0.10	938	0.15	1175	0.28	1391	0.43														
1289	1000	941	0.15	1058	0.22	1260	0.36	1446	0.52	1620	0.70	1792	0.91										
1547	1200	1080	0.23	1188	0.31	1365	0.47	1532	0.64	1688	0.83	1834	1.04	1979	1.27	2123	1.52						
1805	1400	1226	0.34	1321	0.43	1487	0.61	1633	0.80	1776	1.00	1912	1.22	2040	1.46	2164	1.71	2288	1.98	2411	2.25	2534	2.55
2062	1600	1375	0.47	1458	0.57	1616	0.78	1749	0.99	1876	1.21	2001	1.44	2123	1.69	2238	1.95	2349	2.22	2458	2.51	2566	2.81
2320	1800	1527	0.65	1602	0.76	1747	0.99	1876	1.23	1991	1.46	2103	1.70	2215	1.96	2325	2.24	2430	2.52	2532	2.82		
2578	2000	1680	0.86	1748	0.98	1881	1.23	2006	1.50	2116	1.76	2218	2.02	2320	2.29	2421	2.58	2520	2.87				
2836	2200	1835	1.12	1898	1.25	2019	1.52	2137	1.81	2245	2.10	2342	2.38	2435	2.67	2528	2.97						
3094	2400	1991	1.42	2049	1.57	2161	1.86	2271	2.17	2375	2.49	2471	2.80	2560	3.11								
3351	2600	2147	1.78	2201	1.94	2305	2.25	2407	2.58	2507	2.93												

**Size 165**

Wheel Diameter: 16.50"

Outlet Area: 1.56 ft<sup>2</sup>

Fan Efficiency Grade = FEG67

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
624	400	534	0.04																				
936	600	620	0.07	767	0.13																		
1248	800	735	0.12	853	0.18	1068	0.34	1265	0.52														
1560	1000	855	0.19	962	0.27	1146	0.43	1315	0.63	1473	0.85	1630	1.10										
1872	1200	982	0.28	1080	0.38	1241	0.57	1393	0.78	1535	1.01	1668	1.27	1799	1.54	1930	1.83						
2184	1400	1115	0.41	1201	0.52	1352	0.74	1484	0.96	1614	1.21	1738	1.48	1854	1.76	1967	2.07	2080	2.39	2192	2.73	2304	3.08
2496	1600	1250	0.57	1326	0.69	1469	0.95	1590	1.20	1706	1.46	1820	1.75	1930	2.04	2035	2.36	2136	2.69	2234	3.04	2333	3.40
2808	1800	1388	0.78	1456	0.91	1588	1.20	1705	1.48	1810	1.77	1912	2.06	2014	2.38	2114	2.71	2210	3.05	2302	3.41		
3120	2000	1528	1.04	1590	1.19	1710	1.49	1824	1.82	1924	2.13	2017	2.44	2109	2.77	2201	3.12	2291	3.47				
3432	2200	1669	1.35	1725	1.51	1836	1.84	1943	2.19	2041	2.54	2130	2.89	2214	3.23	2298	3.59						
3744	2400	1810	1.72	1862	1.89	1964	2.25	2064	2.63	2159	3.01	2247	3.39	2327	3.76								
4056	2600	1953	2.16	2001	2.34	2096	2.73	2189	3.13	2279	3.54												

**Size 182**

Wheel Diameter: 18.25"

Outlet Area: 1.93 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
772	400	473	0.05	634	0.10																		
1158	600	558	0.08	681	0.14	901	0.30	1088	0.48	1251	0.68												
1544	800	657	0.14	767	0.21	947	0.38	1113	0.59	1268	0.81	1407	1.05	1536	1.31	1655	1.57						
1930	1000	766	0.22	862	0.31	1024	0.50	1166	0.72	1302	0.98	1432	1.24	1555	1.52	1670	1.81	1779	2.12	1882	2.43	1980	2.76
2316	1200	881	0.32	965	0.43	1117	0.66	1243	0.89	1362	1.15	1477	1.45	1588	1.76	1697	2.08	1801	2.41	1902	2.75	1997	3.10
2702	1400	999	0.47	1075	0.60	1213	0.86	1335	1.13	1442	1.40	1544	1.69	1645	2.02	1742	2.37	1838	2.74	1931	3.11	2022	3.48
3088	1600	1121	0.66	1189	0.80	1314	1.10	1429	1.40	1534	1.71	1627	2.01	1717	2.33	1806	2.69	1894	3.08	1979	3.48	2063	3.90
3474	1800	1244	0.90	1306	1.05	1421	1.38	1527	1.72	1628	2.06	1720	2.41	1804	2.75	1885	3.10	1964	3.48	2043	3.89		
3860	2000	1369	1.19	1425	1.36	1532	1.73	1630	2.09	1725	2.47	1814	2.85	1897	3.24	1974	3.62	2048	4.00				
4246	2200	1495	1.54	1547	1.73	1645	2.13	1738	2.53	1826	2.94	1910	3.35	1991	3.77	2068	4.20						
4632	2400	1621	1.96	1669	2.17	1761	2.59	1848	3.03	1931	3.48	2010	3.92	2088	4.38								
5018	2600	1748	2.45	1793	2.68	1879	3.14	1961	3.61	2039	4.08	2114	4.57										

Maximum outlet velocity for restaurant applications is 1800 fpm.  
 Performance certified is for installation Type A: free inlet, free outlet.  
 Power rating (BHP) does not include transmission losses.  
 Performance ratings include the effects of a discharge scoop.

**Size 200**

Wheel Diameter: 20.00"

Outlet Area: 2.32 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
927	400	432	0.06	578	0.12																		
1391	600	510	0.10	622	0.17	822	0.36	993	0.58	1141	0.81												
1854	800	599	0.16	700	0.26	864	0.46	1016	0.71	1157	0.98	1284	1.26	1401	1.57	1510	1.89						
2318	1000	699	0.26	787	0.37	934	0.60	1064	0.86	1188	1.17	1306	1.49	1419	1.82	1524	2.17	1623	2.54	1717	2.92	1807	3.31
2782	1200	804	0.39	881	0.52	1019	0.80	1135	1.07	1243	1.38	1348	1.74	1449	2.11	1548	2.50	1644	2.89	1735	3.30	1822	3.72
3245	1400	912	0.56	981	0.72	1106	1.03	1218	1.35	1316	1.68	1409	2.03	1501	2.42	1590	2.85	1677	3.29	1762	3.73	1845	4.18
3709	1600	1023	0.79	1085	0.96	1199	1.32	1304	1.68	1400	2.05	1485	2.42	1567	2.80	1648	3.23	1728	3.69	1806	4.18	1882	4.68
4172	1800	1135	1.07	1192	1.27	1296	1.66	1394	2.07	1485	2.47	1569	2.89	1646	3.30	1720	3.73	1792	4.18	1864	4.67		
4636	2000	1249	1.43	1301	1.64	1398	2.07	1488	2.52	1574	2.97	1655	3.42	1731	3.89	1802	4.35	1869	4.81				
5100	2200	1364	1.85	1411	2.08	1501	2.55	1586	3.04	1666	3.53	1743	4.03	1817	4.53	1887	5.04						
5563	2400	1479	2.35	1523	2.60	1607	3.12	1686	3.64	1762	4.18	1835	4.72	1905	5.26								
6027	2600	1595	2.94	1636	3.21	1715	3.77	1790	4.34	1861	4.91	1929	5.48										

**Size 222**

Wheel Diameter: 22.25"

Outlet Area: 2.87 ft<sup>2</sup>

Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1148	400	388	0.07	520	0.15																		
1721	600	458	0.12	559	0.21	739	0.45	893	0.71	1026	1.01												
2295	800	539	0.20	629	0.32	777	0.57	913	0.88	1040	1.21	1154	1.56	1260	1.94	1357	2.34						
2869	1000	628	0.32	707	0.46	840	0.74	957	1.07	1068	1.45	1174	1.84	1276	2.26	1370	2.69	1459	3.14	1544	3.61	1624	4.10
3443	1200	722	0.48	792	0.65	916	0.98	1020	1.33	1117	1.71	1212	2.16	1303	2.62	1392	3.09	1478	3.58	1560	4.09	1638	4.61
4017	1400	820	0.70	882	0.89	995	1.28	1095	1.67	1183	2.08	1267	2.51	1349	3.00	1429	3.52	1507	4.07	1584	4.62	1659	5.18
4590	1600	919	0.98	975	1.19	1078	1.63	1172	2.08	1258	2.54	1335	2.99	1409	3.47	1482	4.00	1553	4.57	1623	5.17		
5164	1800	1020	1.33	1071	1.57	1165	2.05	1253	2.56	1335	3.06	1411	3.58	1480	4.09	1546	4.61	1611	5.17				
5738	2000	1123	1.77	1169	2.03	1256	2.56	1337	3.11	1415	3.68	1488	4.24	1556	4.81	1620	5.38						
6312	2200	1226	2.29	1269	2.58	1350	3.16	1425	3.76	1497	4.37	1567	4.99										
6886	2400	1330	2.91	1369	3.22	1445	3.86	1516	4.51	1584	5.17												
7459	2600	1434	3.64	1471	3.98	1541	4.66	1608	5.36														

**Size 245**

Wheel Diameter: 24.50"

Outlet Area: 3.48 ft<sup>2</sup>

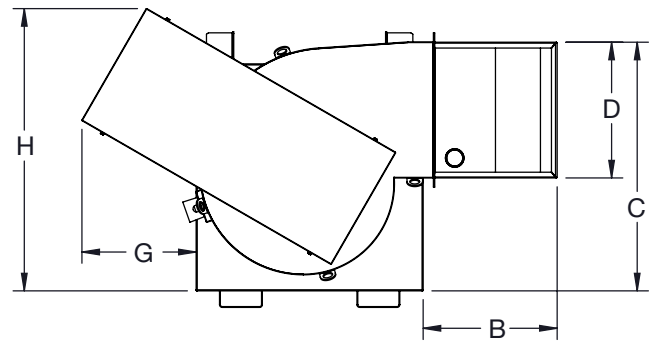
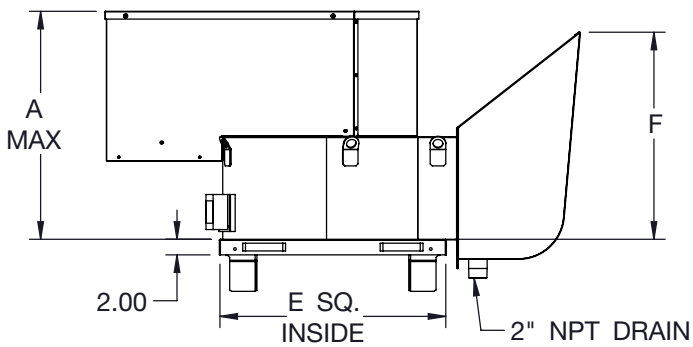
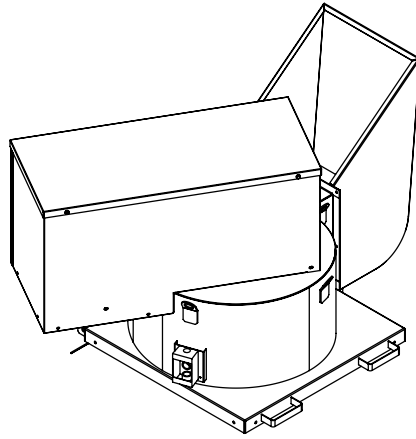
Fan Efficiency Grade = FEG71

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1391	400	353	0.09	472	0.18																		
2087	600	416	0.15	507	0.26	671	0.54	811	0.86	932	1.22												
2782	800	489	0.25	571	0.38	705	0.69	829	1.07	944	1.47	1048	1.90	1144	2.35	1233	2.84						
3478	1000	570	0.39	642	0.56	763	0.90	869	1.30	970	1.76	1066	2.23	1158	2.73	1244	3.26	1325	3.81	1402	4.38	1475	4.97
4174	1200	656	0.58	719	0.78	832	1.19	926	1.61	1015	2.08	1101	2.62	1183	3.17	1264	3.75	1342	4.34	1416	4.95	1487	5.58
4869	1400	744	0.85	801	1.08	903	1.55	994	2.03	1074	2.51	1150	3.04	1225	3.63	1298	4.27	1369	4.93	1438	5.59	1506	6.27
5565	1600	835	1.19	886	1.45	979	1.98	1065	2.52	1142	3.07	1212	3.62	1279	4.20	1346	4.85	1411	5.55	1474	6.27	1537	7.03
6260	1800	927	1.61	973	1.90	1058	2.49	1138	3.10	1212	3.71	1281	4.34	1344	4.96	1404	5.59	1463	6.27	1522	7.01		
6956	2000	1020	2.14	1062	2.46	1141	3.11	1214	3.77	1285	4.46	1351	5.14	1413	5.83	1471	6.52	1525	7.21				
7652	2200	1113	2.77	1152	3.12	1226	3.84	1294	4.56	1360	5.30	1423	6.05	1483	6.80	1540	7.56						
8347	2400	1207	3.53	1243	3.90	1312	4.68	1376	5.46	1438	6.26	1498	7.08	1555	7.89								
9043	2600	1302	4.41	1336	4.83	1400	5.66	1461	6.51	1519	7.36	1575	8.23										

Maximum outlet velocity for restaurant applications is 1800 fpm.  
 Performance certified is for installation Type A: free inlet, free outlet.  
 Power rating (BHP) does not include transmission losses.  
 Performance ratings include the effects of a discharge scoop.



## Model BHRE - Belt Driven

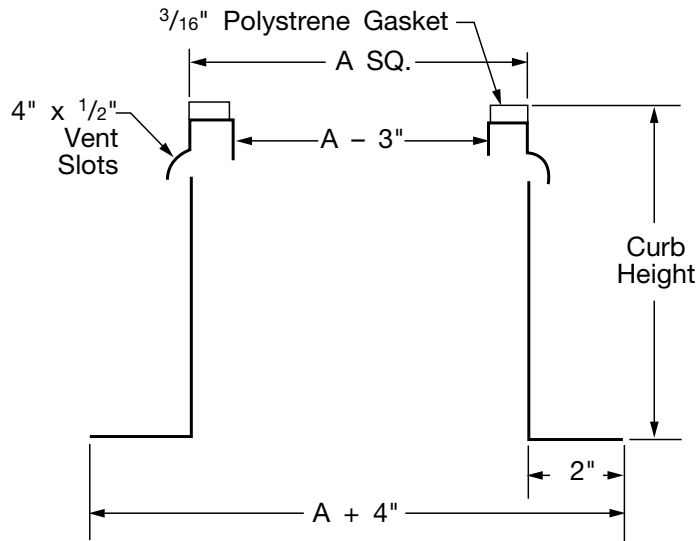


SIZE	A	B	C	D	E	F	G	H	AVG. SHIP WT. (LBS)*
105	25.74	11.57	21.14	11.21	20.00	17.69	12.05	26.90	173
122	26.87	13.24	24.44	13.02	23.00	20.13	12.12	29.29	193
135	28.93	14.43	26.76	14.34	25.00	22.11	14.10	32.61	251
150	30.05	15.86	29.58	15.90	27.50	24.36	14.35	34.72	267
165	31.30	17.28	31.85	17.43	29.00	26.69	14.74	36.17	294
182	32.68	18.94	35.08	19.40	31.50	29.38	14.75	38.11	348
200	34.08	20.62	38.14	21.21	34.00	32.09	15.28	40.38	380
222	35.77	22.76	42.52	23.59	38.00	35.45	16.04	43.98	446
245	38.63	24.89	46.61	25.93	41.50	38.83	19.60	50.09	573

\*Consult Fan Selector Program for specific ship weights.

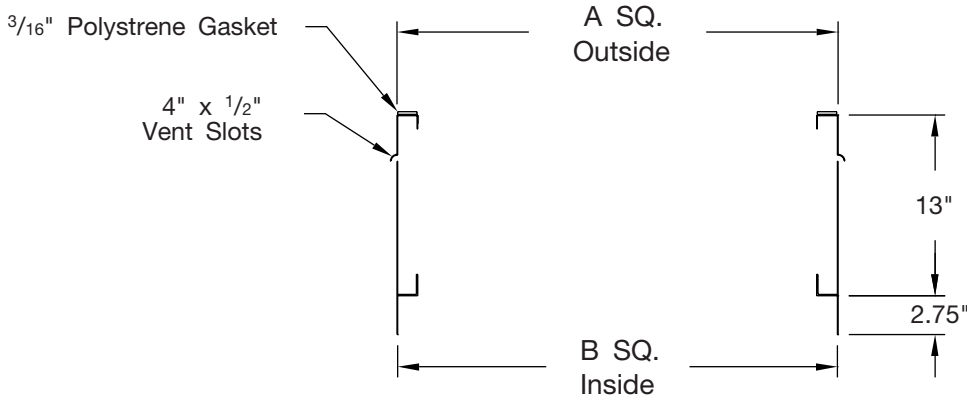


## Self-Flashing Vented Roof Curb



SIZE	A SQ
105	18.50
122	21.50
135	23.50
150	26.00
165	27.50
182	30.00
200	32.50
222	36.50
245	40.00

## Vented Curb Extension



SIZE	A SQ	B SQ
105	19.50	19.25
122	22.50	22.25
135	24.50	24.25
150	27.00	26.75
165	28.50	28.25
182	31.00	30.75
200	33.50	33.25
222	37.50	37.25
245	41.00	40.75

Fans shall be Model BHRE Belt Driven Hinged Restaurant Exhaust Fans, as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

**PERFORMANCE** — Performance ratings shall conform to AMCA Standard 205 (fan efficiency grade), 211 (air performance) and 311 (sound performance). Fans shall be tested in accordance with ANSI/AMCA Standard 210 (air performance) and 300 (sound performance) in an AMCA accredited laboratory. Fans shall be licensed to bear the AMCA certified ratings seal for both sound and air, and fan efficiency grade (FEG).

Fans shall have a sharply rising pressure characteristic extending through the operating range and continuing to rise beyond the peak efficiency to ensure quiet and stable operation. Fans shall have a non-overloading design with self-limiting horsepower characteristics and shall reach a peak in the normal selection area. All fans shall be capable of operating over the minimum pressure class limits as specified in AMCA Standard 99.

Model BHRE shall be UL 762 listed for the exhaust of grease-laden air. Fans shall bear a permanently attached nameplate displaying model and serial number of the unit for future identification.

**CONSTRUCTION** — Fan housings shall be heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable. Housings shall be suitably braced to prevent vibration or pulsation. Housings shall have tapered spun, aerodynamically designed inlet cones or shrouds providing stable flow and high rigidity. The curb cap shall include prepunched mounting holes for ease of installation. Lifting lugs shall be welded to the fan housing for ease of handling and installation. Vibration isolators support and isolate the motor, shaft, bearings and wheel assembly from the unit, reducing noise transmission into the ductwork.

**WHEELS** — Backward inclined wheels shall be single thickness plate type designed for maximum efficiency and quiet operation and shall be of the non-overloading type. BHRE wheels shall be constructed of heavy gauge steel with welded (not riveted) blades. All wheels shall be statically and dynamically balanced.

**SHAFT** — Shafts shall be AISI 1040 or 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

**BEARINGS** — Bearings shall be heavy duty, grease lubricated, anti-friction ball, self-aligning, pillow block type and selected for a minimum L-50 life in excess of 200,000 hours at the maximum fan RPM.

**DRIVE** — Motor sheaves shall be cast iron, and supplied as either variable pitch or fixed pitch. BHRE drives and belts shall be rated for a minimum of 150% of the required motor HP.

**FINISH AND COATING** — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and deburred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant.

**ACCESSORIES** — When specified, accessories such as swingout wheel, extended discharge, grease box, roof curb, etc., 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 wheel 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.

**GUARANTEE** — The manufacturer shall guarantee the workmanship and materials for its BHRE fans for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

# INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS  
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS  
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS  
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS  
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



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