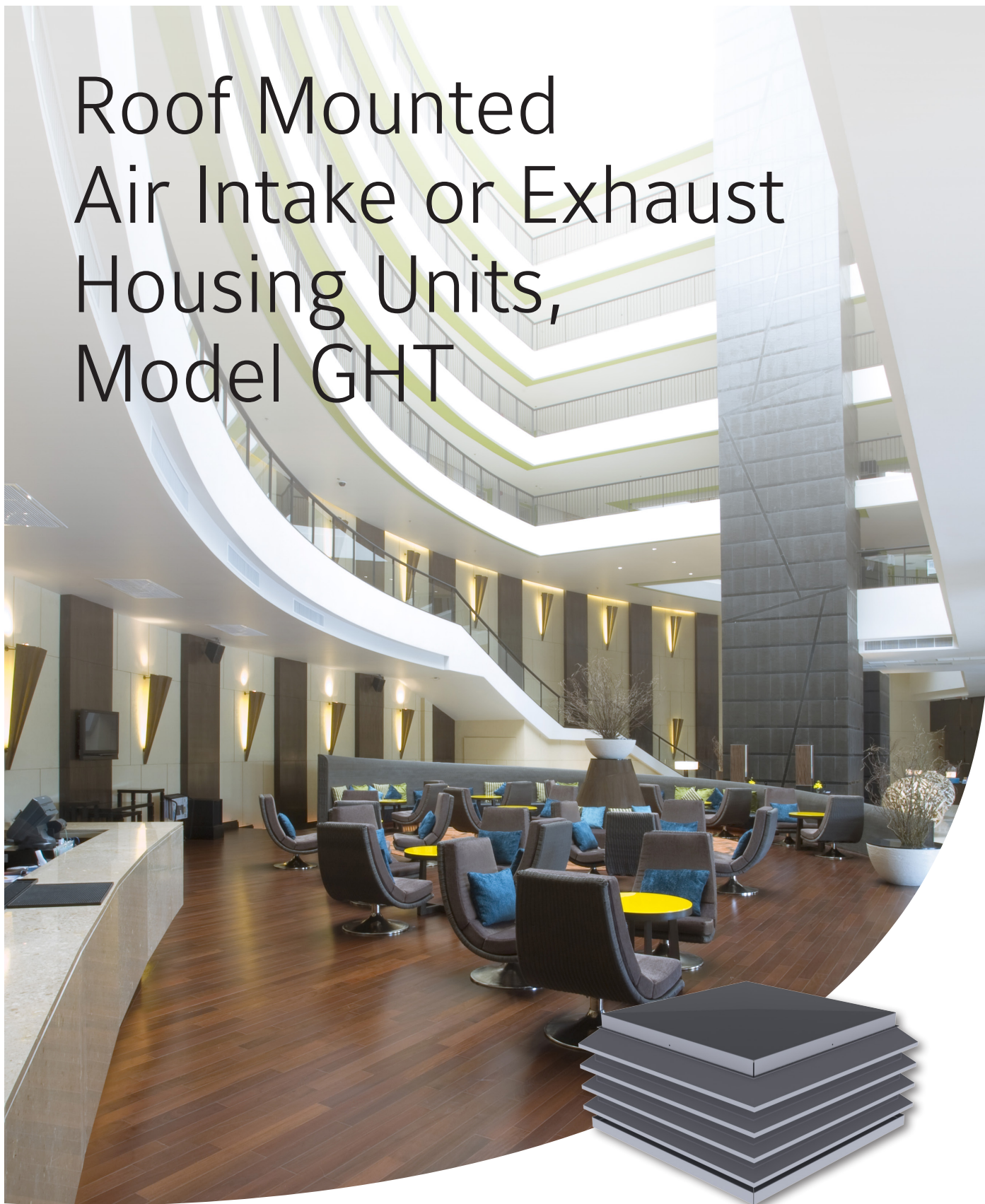


Roof Mounted Air Intake or Exhaust Housing Units, Model GHT



BY JOHNSON CONTROLS

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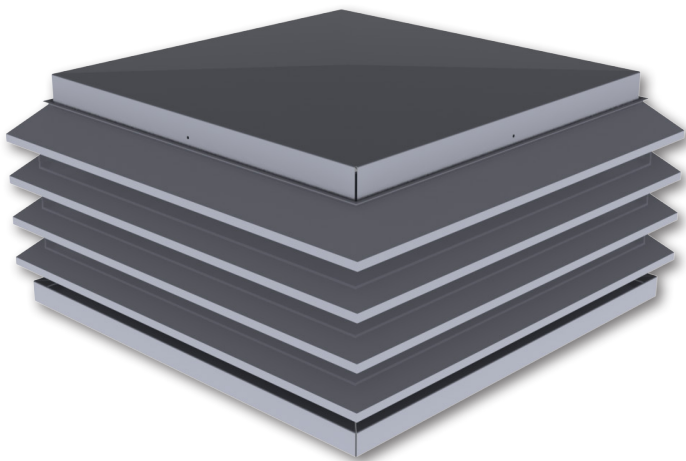
BY JOHNSON CONTROLS

INTRODUCTION

Roof Mounted Louvered Ventilator

YORK® by Johnson Controls GHT units are attractive, architecturally appealing housings designed for several uses. Units serve frequently as gravity ventilators, pressure relief units, fan discharge caps, spillways, fresh air intakes, and sight shields (for aesthetic purposes) for roof-mounted equipment. The silhouette of the GHT unit is compatible with the CRDE centrifugal exhaust line. This serves to maintain architectural harmony where units of both types are required on the same roof.

GHT louver blades are heavy aluminum alloy made from .081" thickness 6063 T5 extrusion. The storm blade feature is standard on all model GHTs and provides extra rigidity for the blades. Unit corners are a mitered corner with aluminum welded construction. Large custom size units, where the dimensions exceed 60" x 120" x 56.5" are generally shipped in sections. Consult our factory for construction details. Structural framing for the unit is sturdy extruded aluminum members on maximum 48" centers. Vertical angles project down to the curb cap and are a convenient and strong place for fastening to the roof curb.



Model: GHT

Available in Pre-Assembled sizes of up to 60" x 120" x 56.5"*.

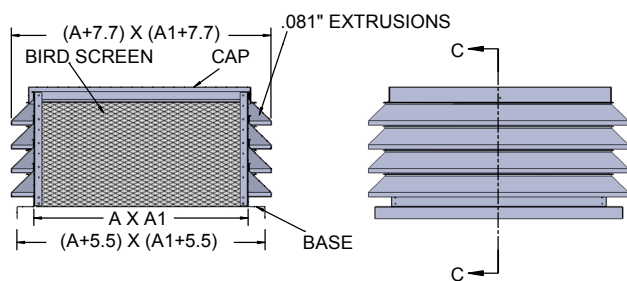
**Large sizes will be shipped in sections.*

FEATURES & BENEFITS

Built for Maximum Stress

- The Flat Roof (cross broke) is braced for 30 pounds per square foot snow load.
- Units are braced to withstand up to 60 mph wind load.

Extruded Aluminum Model GHT



OPTIONS & ACCESSORIES

Hinged Roof / Insulated Roof / Pitched Roof

For GHT sizes not exceeding 60"x60" throat, the roof can be hinged for lift up access. 1" insulation shall be directly affixed to underside of the roof. Pitched roof is also available, but required when the shortest dimension exceeds 72".

Dampers

Where additional air control is necessary, GHT units can be fitted with backdraft or control dampers. Installed in the throat, dampers may be operated by electric motors or manual actuators. Units are manufactured and shipped in matched, modular sections for easy on-site installation with dampers installed and test-cycled at the factory before shipment.

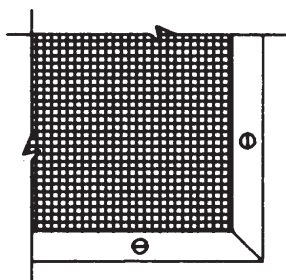
Expanded Metal Screens

.051" aluminum diamond mesh, 3/4" size is available. This screen has the highest free area for bird screens.

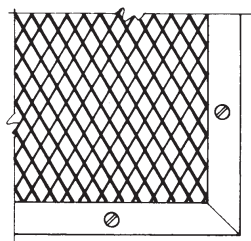
Insect Screens

Framed insect screens are stocked in 18"x14", .011" mesh aluminum.

Note: For design free area velocity up to 1200 FPM the effect of a screen is negligible. If design velocities required are greater, consult factory.



Insect Screen



Expanded Metal

Security Bars

Selection of bar diameters, frame styles and spacing are available.

Roof Curbs

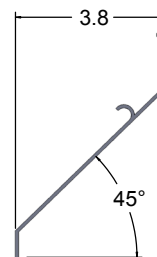
See the latest Roof Curbs catalog for a full line of YORK® by Johnson Controls Roof Curbs.

Filters for Intake Vents

All louver model GHTs can be supplied with filter racks and disposable or permanent filters in a wide range of styles and efficiencies. 1" and 2" filter racks are available on front or rear, hinged or flush mount, top or side loading.

Louvers

Extruded aluminum model GHTs are available in the 0.081" thick, 45° step blade louver as standard.



GHT SIZING GUIDE

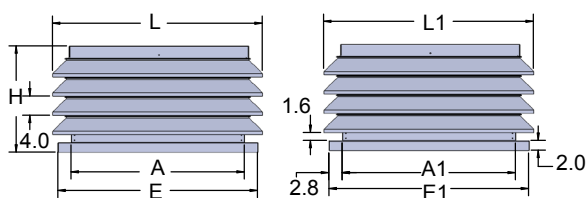
Air Flow (cfm) ÷ Louver Velocity (fpm) = Free Area (Square Feet)

1. Use the [Static Pressure Loss Chart](#) and determine the [Louver Free Area Velocity](#) (fpm) that has both an acceptable Pressure Drop and Velocity Area required.
2. Execute the formula above to calculate the [Free Area](#) required.
3. Use the [GHT Sizing Chart](#) to find the [Free Area](#) required (square feet), move down the column of throat sizes and heights to find the appropriate fit.

Louver velocities above 500 fpm are not recommended for Intake.

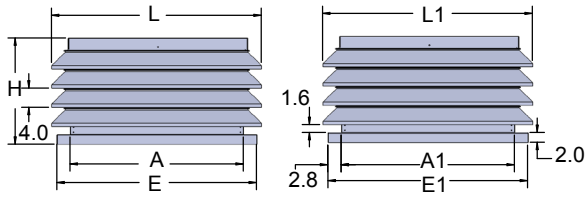
GHT HEIGHT should not exceed more than 1/2 the length of the shortest side for Intake units (as determined by AMCA).

GHT | RELIEF



Throat Area	Throat Size (Ax A')	Curb Cap (E x E')		Hood Size (L x L')		Min # Tiers	Hood Height	Total Pressure Drop (in. wg.)												
								0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.2	0.24	0.29	0.43	0.68
								Throat Velocity (FPM)												
								300	400	500	600	700	800	900	1000	1100	1200	1300	1600	2000
1.0	12x12	17.5	17.5	19.8	19.8	2	14.5	300	400	500	600	700	800	900	1000	1100	1200	1300	1600	2000
1.2	12x14	17.5	19.5	19.8	21.8	2	14.5	350	467	583	700	817	933	1050	1167	1283	1400	1517	1867	2333
1.3	12x16	17.5	21.5	19.8	23.8	2	14.5	400	533	667	800	933	1067	1200	1333	1467	1600	1733	2133	2667
1.5	12x18	17.5	23.5	19.8	25.8	2	14.5	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2400	3000
2.0	12x24	17.5	29.5	19.8	31.8	2	14.5	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	3200	4000
1.4	14x14	19.5	19.5	21.8	21.8	2	14.5	408	544	681	817	953	1089	1225	1361	1497	1633	1769	2178	2722
1.6	14x16	19.5	21.5	21.8	23.8	2	14.5	467	622	778	933	1089	1244	1400	1556	1711	1867	2022	2489	3111
1.8	14x18	19.5	23.5	21.8	25.8	2	14.5	525	700	875	1050	1225	1400	1575	1750	1925	2100	2275	2800	3500
2.3	14x24	19.5	29.5	21.8	31.8	2	14.5	700	933	1167	1400	1633	1867	2100	2333	2567	2800	3033	3733	4667
2.9	14x30	19.5	35.5	21.8	37.8	2	14.5	875	1167	1458	1750	2042	2333	2625	2917	3208	3500	3792	4667	5833
1.8	16x16	21.5	21.5	23.8	23.8	2	14.5	533	711	889	1067	1244	1422	1600	1778	1956	2133	2311	2844	3556
2.0	16x18	21.5	23.5	23.8	25.8	2	14.5	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	3200	4000
2.7	16x24	21.5	29.5	23.8	31.8	2	14.5	800	1067	1333	1600	1867	2133	2400	2667	2933	3200	3467	4267	5333
3.3	16x30	21.5	35.5	23.8	37.8	3	18.5	1000	1333	1667	2000	2333	2667	3000	3333	3667	4000	4333	5333	6667
3.6	16x32	21.5	37.5	23.8	39.8	3	18.5	1067	1422	1778	2133	2489	2844	3200	3556	3911	4267	4622	5689	7111
2.3	18x18	23.5	23.5	25.8	25.8	2	14.5	675	900	1125	1350	1575	1800	2025	2250	2475	2700	2925	3600	4500
3.0	18x24	23.5	29.5	25.8	31.8	2	14.5	900	1200	1500	1800	2100	2400	2700	3000	3300	3600	3900	4800	6000
3.8	18x30	23.5	35.5	25.8	37.8	3	18.5	1125	1500	1875	2250	2625	3000	3375	3750	4125	4500	4875	6000	7500
4.0	18x32	23.5	37.5	25.8	39.8	3	18.5	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800	5200	6400	8000
4.5	18x36	23.5	41.5	25.8	43.8	3	18.5	1350	1800	2250	2700	3150	3600	4050	4500	4950	5400	5850	7200	9000
4.0	24x24	29.5	29.5	31.8	31.8	3	18.5	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800	5200	6400	8000
5.0	24x30	29.5	35.5	31.8	37.8	3	18.5	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	8000	10000
5.3	24x32	29.5	37.5	31.8	39.8	3	18.5	1600	2133	2667	3200	3733	4267	4800	5333	5867	6400	6933	8533	10667
6.0	24x36	29.5	41.5	31.8	43.8	4	22.5	1800	2400	3000	3600	4200	4800	5400	6000	6600	7200	7800	9600	12000
7.0	24x42	29.5	47.5	31.8	49.8	4	22.5	2100	2800	3500	4200	4900	5600	6300	7000	7700	8400	9100	11200	14000
8.0	24x48	29.5	53.5	31.8	55.8	4	22.5	2400	3200	4000	4800	5600	6400	7200	8000	8800	9600	10400	12800	16000
6.3	30x30	35.5	35.5	37.8	37.8	3	18.5	1875	2500	3125	3750	4375	5000	5625	6250	6875	7500	8125	10000	12500
6.7	30x32	35.5	37.5	37.8	39.8	3	18.5	2000	2667	3333	4000	4667	5333	6000	6667	7333	8000	8667	10667	13333
7.5	30x36	35.5	41.5	37.8	43.8	4	22.5	2250	3000	3750	4500	5250	6000	6750	7500	8250	9000	9750	12000	15000
8.8	30x42	35.5	47.5	37.8	49.8	4	22.5	2625	3500	4375	5250	6125	7000	7875	8750	9625	10500	11375	14000	17500
10.0	30x48	35.5	53.5	37.8	55.8	4	22.5	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	16000	20000
11.3	30x54	35.5	59.5	37.8	61.8	5	26.5	3375	4500	5625	6750	7875	9000	10125	11250	12375	13500	14625	18000	22500
12.5	30x60	35.5	65.5	37.8	67.8	6	30.5	3750	5000	6250	7500	8750	10000	11250	12500	13750	15000	16250	20000	25000
7.1	32x32	37.5	37.5	39.8	39.8	3	18.5	2133	2844	3556	4267	4978	5689	6400	7111	7822	8533	9244	11378	14222
8.0	32x36	37.5	41.5	39.8	43.8	4	22.5	2400	3200	4000	4800	5600	6400	7200	8000	8800	9600	10400	12800	16000
9.3	32x42	37.5	47.5	39.8	49.8	4	22.5	2800	3733	4667	5600	6533	7467	8400	9333	10267	11200	12133	14933	18667
10.7	32x48	37.5	53.5	39.8	55.8	4	22.5	3200	4267	5333	6400	7467	8533	9600	10667	11733	12800	13867	17067	21333
12.0	32x54	37.5	59.5	39.8	61.8	5	26.5	3600	4800	6000	7200	8400	9600	10800	12000	13200	14400	15600	19200	24000
13.3	32x60	37.5	65.5	39.8	67.8	6	30.5	4000	5333	6667	8000	9333	10667	12000	13333	14667	16000	17333	21333	26667
16.0	32x72	37.5	77.5	39.8	79.8	7	34.5	4800	6400	8000	9600	11200	12800	14400	16000	17600	19200	20800	25600	32000
9.0	36x36	41.5	41.5	43.8	43.8	4	22.5	2700	3600	4500	5400	6300	7200	8100	9000	9900	10800	11700	14400	18000
10.5	36x42	41.5	47.5	43.8	49.8	4	22.5	3150	4200	5250	6300	7350	8400	9450	10500	11550	12600	13650	16800	21000
12.0	36x48	41.5	53.5	43.8	55.8	5	26.5	3600	4800	6000	7200	8400	9600	10800	12000	13200	14400	15600	19200	24000
13.5	36x54	41.5	59.5	43.8	61.8	5	26.5	4050	5400	6750	8100	9450	10800	12150	13500	14850	16200	17550	21600	27000
15.0	36x60	41.5	65.5	43.8	67.8	6	30.5	4500	6000	7500	9000	10500	12000	13500	15000	16500	18000	19500	24000	30000
18.0	36x72	41.5	77.5	43.8	79.8	7	34.5	5400	7200	9000	10800	12600	14400	16200	18000	19800	21600	23400	28800	36000
12.3	42x42	47.5	47.5	49.8	49.8	5	26.5	3675	4900	6125	7350	8575	9800	11025	12250	13475	14700	15925	19600	24500
14.0	42x48	47.5	53.5	49.8	55.8	5	26.5	4200	5600	7000	8400	9800	11200	12600	14000	15400	16800	18200	22400	28000
15.8	42x54	47.5	59.5	49.8	61.8	5	26.5	4725	6300	7875	9450	11025	12600	14175	15750	17325	18900	20475	25200	31500

GHT | INTAKE



Throat Area	Throat Size (A x A')	Curb Cap (E x E')		Hood Size (L x L')		Min # Tiers	Hood Height	Total Pressure Drop (in. wg.)												
								0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.2	0.24	0.29	0.43	0.68
								Throat Velocity (FPM)												
								300	400	500	600	700	800	900	1000	1100	1200	1300	1600	2000
15.0	36x60	41.5	65.5	43.8	67.8	6	30.5	4500	6000	7500	9000	10500	12000	13500	15000	16500	18000	19500	24000	30000
18.0	36x72	41.5	77.5	43.8	79.8	7	34.5	5400	7200	9000	10800	12600	14400	16200	18000	19800	21600	23400	28800	36000
12.3	42x42	47.5	47.5	49.8	49.8	5	26.5	3675	4900	6125	7350	8575	9800	11025	12250	13475	14700	15925	19600	24500
14.0	42x48	47.5	53.5	49.8	55.8	5	26.5	4200	5600	7000	8400	9800	11200	12600	14000	15400	16800	18200	22400	28000
15.8	42x54	47.5	59.5	49.8	61.8	5	26.5	4725	6300	7875	9450	11025	12600	14175	15750	17325	18900	20475	25200	31500
17.5	42x60	47.5	65.5	49.8	67.8	6	30.5	5250	7000	8750	10500	12250	14000	15750	17500	19250	21000	22750	28000	35000
21.0	42x72	47.5	77.5	49.8	79.8	7	34.5	6300	8400	10500	12600	14700	16800	18900	21000	23100	25200	27300	33600	42000
24.5	42x84	47.5	89.5	49.8	91.8	8	38.5	7350	9800	12250	14700	17150	19600	22050	24500	26950	29400	31850	39200	49000
16.0	48x48	53.5	53.5	55.8	55.8	5	26.5	4800	6400	8000	9600	11200	12800	14400	16000	17600	19200	20800	25600	32000
18.0	48x54	53.5	59.5	55.8	61.8	6	30.5	5400	7200	9000	10800	12600	14400	16200	18000	19800	21600	23400	28800	36000
20.0	48x60	53.5	65.5	55.8	67.8	6	30.5	6000	8000	10000	12000	14000	16000	18000	20000	22000	24000	26000	32000	40000
24.0	48x72	53.5	77.5	55.8	79.8	7	34.5	7200	9600	12000	14400	16800	19200	21600	24000	26400	28800	31200	38400	48000
28.0	48x84	53.5	89.5	55.8	91.8	8	38.5	8400	11200	14000	16800	19600	22400	25200	28000	30800	33600	36400	44800	56000
32.0	48x96	53.5	101.5	55.8	103.8	9	42.5	9600	12800	16000	19200	22400	25600	28800	32000	35200	38400	41600	51200	64000
20.3	54x54	59.5	59.5	61.8	61.8	6	30.5	6075	8100	10125	12150	14175	16200	18225	20250	22275	24300	26325	32400	40500
22.5	54x60	59.5	65.5	61.8	67.8	6	30.5	6750	9000	11250	13500	15750	18000	20250	22500	24750	27000	29250	36000	45000
27.0	54x72	59.5	77.5	61.8	79.8	7	34.5	8100	10800	13500	16200	18900	21600	24300	27000	29700	32400	35100	43200	54000
31.5	54x84	59.5	89.5	61.8	91.8	8	38.5	9450	12600	15750	18900	22050	25200	28350	31500	34650	37800	40950	50400	63000
36.0	54x96	59.5	101.5	61.8	103.8	9	42.5	10800	14400	18000	21600	25200	28800	32400	36000	39600	43200	46800	57600	72000
40.5	54x108	59.5	113.5	61.8	115.8	10	46.5	12150	16200	20250	24300	28350	32400	36450	40500	44550	48600	52650	64800	81000
25.0	60x60	65.5	65.5	67.8	67.8	7	34.5	7500	10000	12500	15000	17500	20000	22500	25000	27500	30000	32500	40000	50000
30.0	60x72	65.5	77.5	67.8	79.8	7	34.5	9000	12000	15000	18000	21000	24000	27000	30000	33000	36000	39000	48000	60000
36.3	60x84	65.5	89.5	67.8	91.8	8	38.5	10500	14000	17500	21000	24500	28000	31500	35000	38500	42000	45500	56000	70000
41.5	60x96	65.5	101.5	67.8	103.8	9	42.5	12000	16000	20000	24000	28000	32000	36000	40000	44000	48000	52000	64000	80000
46.7	60x108	65.5	113.5	67.8	115.8	10	46.5	13500	18000	22500	27000	31500	36000	40500	45000	49500	54000	58500	72000	90000
51.9	60x120	65.5	125.5	67.8	127.8	12	54.5	15000	20000	25000	30000	35000	40000	45000	50000	55000	60000	65000	80000	100000

PERFORMANCE DATA

Height	Free Area Required (SQUARE FEET)																	
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60
	Throat Size (PERIMETER INCHES)																	
22"	32	66	98	132	164	198	230	262	296	328	410	494	576	656	—	—	—	—
27"	—	—	78	104	130	156	182	208	234	260	326	392	456	522	586	652	—	—
31"	—	—	64	86	108	130	152	172	194	216	270	324	378	432	486	540	594	648
36"	—	—	—	74	92	110	128	146	164	184	228	274	320	366	412	458	504	550
40"	—	—	—	—	—	96	112	128	144	160	200	240	280	320	360	400	440	480
45"	—	—	—	—	—	—	98	112	126	142	176	212	246	282	318	352	388	424
50"	—	—	—	—	—	—	—	102	114	126	160	192	224	256	286	318	350	382
54"	—	—	—	—	—	—	—	—	104	116	144	172	202	230	260	288	316	346
59"	—	—	—	—	—	—	—	—	—	—	132	158	184	212	236	264	290	316
64"	—	—	—	—	—	—	—	—	—	—	—	146	170	194	220	244	268	292
68"	—	—	—	—	—	—	—	—	—	—	—	136	158	180	202	224	248	270
73"	—	—	—	—	—	—	—	—	—	—	—	—	148	168	188	210	230	252
77"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	176	196	216	236

Static Pressure Loss (Inches W.G.)

ENGINEERING SPECIFICATIONS

Model

GHT = Roof Mounted, Louvered
Gravity Ventilator

Application

E = Exhaust
S = Supply

Paint / Coating

0 = None
F = Epoxy Powder Coat*
G = Epoxy Powder Coat with UV*
N = Polyester Powder Coat
* Not available with choice of color.

Color

0 = None
50 = Chrome Green
55 = Pale Green
56 = Dove Gray
61 = White
63 = Oxford Beige
65 = Dover White
66 = Desert Tan
70 = Black
73 = Smoke Gray
77 = Brick Red
79 = Peppercorn
81 = Pale Brown
83 = Chocolate Brown
85 = Timeless Bronze
94 = Charcoal
X = Special

Damper

0 = None
BDD = Gravity Back Draft Damper
MD1 = Gravity Back Draft Damper 115V
MD2 = Gravity Back Draft Damper 230V
MD4 = Gravity Back Draft Damper 460V

Roof Curb

See selection software.

Roof Pitch

0 = None
S = Single Slope
D = Double Slope

Metal Liner

0 = None
L = Metal Liner

Damper Holding Plate

0 = None
P = Damper Holding Plate

Neoprene Gasket

0 = None
G = Gasket

Wooden Nailer

0 = None
W = Wooden Nailer

Bird / Insect Screen

0 = None
A = 18 x 14 Mesh Aluminum Insect Screen*
C = 3/4" Expanded Aluminum Bird Screen
D = 1/2" .047 Welded Stainless Steel
* Insect screen is mounted over 3/4" Expanded Aluminum Bird Screen.

Filter Rack

0 = None
A = 1" Rack with Washable Filter
B = 1" Rack with Disposable Filter
C = 2" Rack with Washable Filter
D = 1" Rack Only
E = 2" Rack Only
F = 2" Rack with Disposable Filter

Hinged Roof

0 = None
R = Hinged Roof

Curb Paint/Coating

0 = None
B = Air Dried Epoxy
Q = Enamel

Mounting Pedestal

0 = None
P = Mounting Pedestal

GHT

Louver house, roof mounted air intake/exhaust housings shall be model GHT, manufactured by YORK® by Johnson Controls. Louver houses shall have heavy .081" thickness extruded aluminum blades of the storm blade style with corners mitered and welded.

Curb caps shall be formed of heavy gauge aluminum and the entire assembly braced by heavy interior aluminum upright angles at the corners and along the sides. Louver houses shall have a (mill finish) and be shipped in pre-assembled sections in sizes up to 60" x 120" x 56.5" and shall have 3/4" expanded aluminum bird screen, and 1" rigid insulation affixed to underside of roof.

At Johnson Controls, we truly understand HVAC systems. In fact, we produce some of the most robust HVAC equipment, parts and controls on the market today. But we don't just sell products. We also offer the expertise, services and strategic insight to make them work within your current system, optimizing your building's performance and lowering your overall costs. If you're interested in revolutionizing your HVAC system, contact an expert today. Otherwise, browse our full-suite of HVAC products.

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