

# High Capacity Drum Louvers

## HCD Series

### Industrial

## Product Information

### Models

#### Standard

Grille **HCD1**

#### Optional

Grilles **HCD2 / AHCD1 / AHCD2**

#### Application

- Long air pattern projection with a high degree of directional control.
- Adjustable vanes for spread control, mounted in rotatable drum to control vertical deflection.
- Ideal solution for air movement in shopping malls, industrial plants, arenas, stadiums or any large enclosed space.
- HCD can supply air to spaces that cannot be served by ductwork and conventional outlets due to structural or architectural restrictions.

#### Features

- Adjustable vanes within a rotatable drum.
- Drum is adjustable through 60 degrees, with positive detent mechanism to fix drum angle setting.
- Optional Spiral Duct Frame allows for easy mounting on spiral ducts.
- HCD2/AHCD2 optional center divider and spread control members provide added pattern flexibility.
- Optional opposed blade damper available (VCS3 or VCS5). See damper application guideline on page D117 for more details.
- Mounting frame c/w countersunk holes.

#### Construction

- HCD1/HCD2 curved outer drum and vanes are extruded aluminum, other components are steel.
- AHCD1/AHCD2 drum vanes and frame are aluminum construction.

#### Mounting / Finish Options

##### Border Style

Surface Mount 1<sup>1</sup>/<sub>4</sub> in. [3] Flat **F**  
 Spiral Duct Frame Aluminum **SDFA**  
 Spiral Duct Frame Galvanized Steel **SDFG**

##### Fastening

Countersunk screwholes **A**  
 c/w oval-head screws

#### Accessories

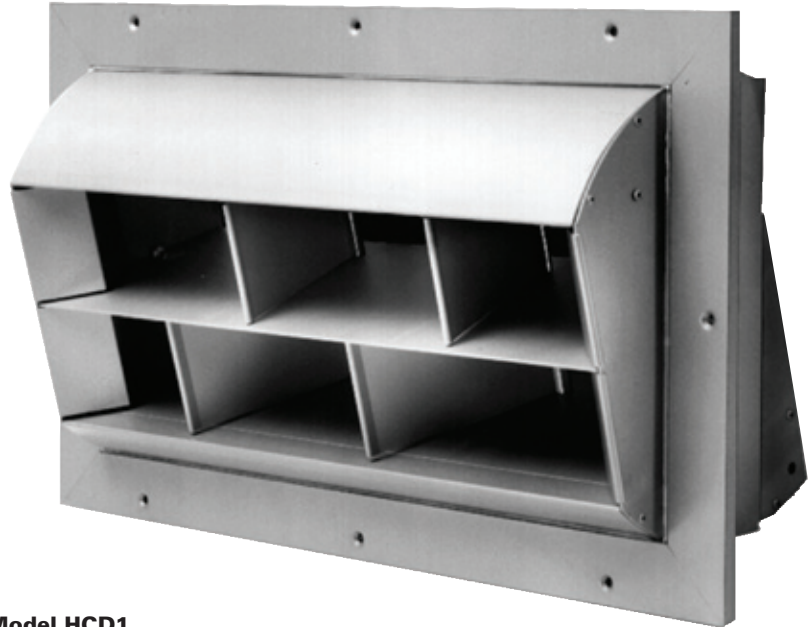
Pole operator bracket (see **POB** Fig. 3 on the next page) for units 48 in. [1219] wide or less.

#### Finish

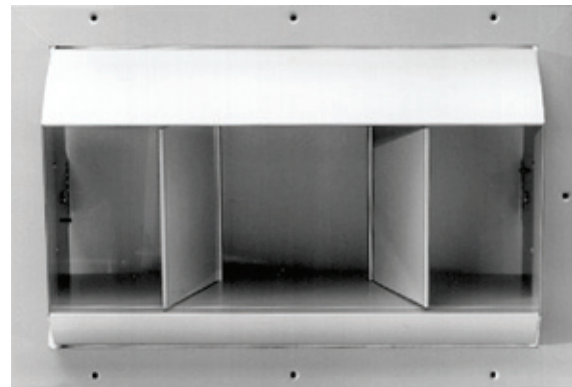
White Powder Coat **B12**  
 Aluminum Powder Coat **B15**  
 Mill Finish (AHCD1, AHCD2 only) **MILL**

For optional and special finishes see color matrix.

### Model HCD2



### Model HCD1



#### HCD / AHCD Available Sizes

Nom. Size	Nominal Length (Dimensional L)												
	9 in.	12 in.	15 in.	18 in.	24 in.	30 in.	36 in.	42 in.	48 in.	54 in.	60 in.	66 in.	72 in.
Width	[229]	[305]	[381]	[457]	[610]	[762]	[914]	[1067]	[1219]	[1372]	[1524]	[1676]	[1829]
6	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	N/A	N/A
10	N/A	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
12	N/A	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
15	N/A	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼

### ✓ Product Selection Checklist

- 1] Select Unit Size based on desired performance characteristics.
- 2] Select Outlet Type by model number (core style, damper).
- 3] Select Pole Operator Bracket option if desired.
- 4] Select Finish.

**Example: 24 x 12 / HCD1 / B12**

# High Capacity Drum Louver Diffuser

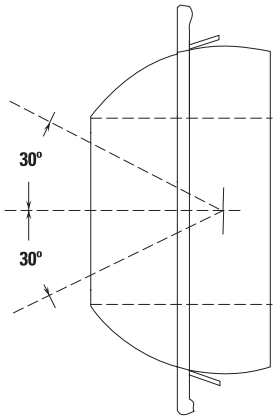
## HCD Series

### Industrial

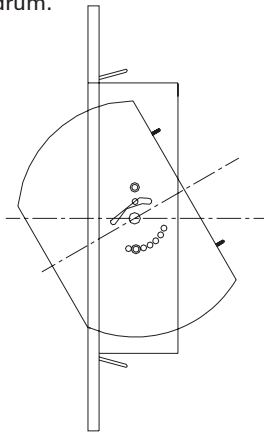


## Product Details

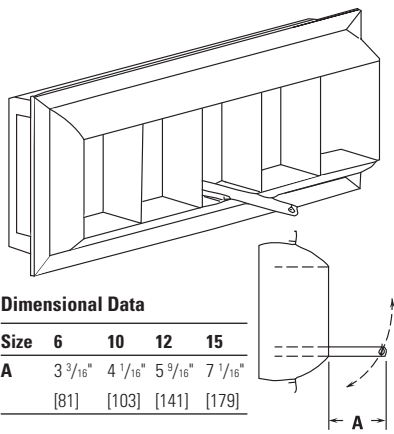
**Fig. 1** Drum can be rotated 30° either side of center line



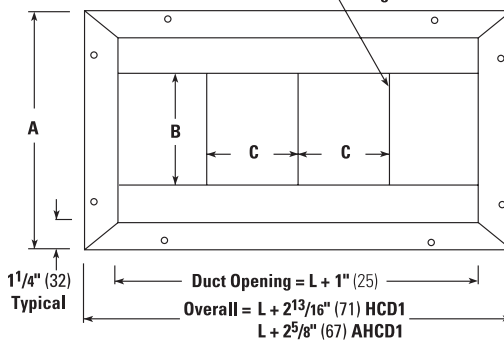
**Fig. 2** Detent mechanism for positioning allows for positive setting of the drum.



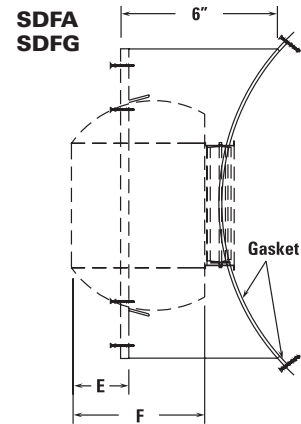
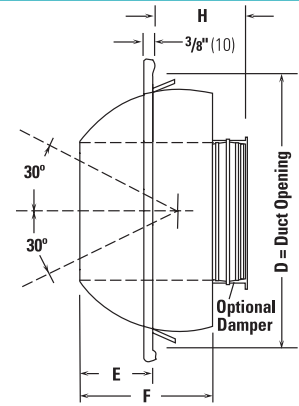
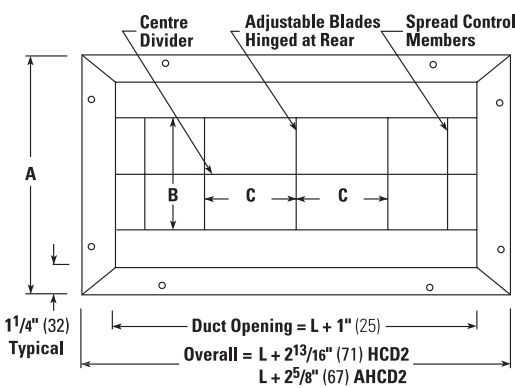
**Fig. 3** POB Pole Operator Bracket



**HCD1 / AHCD1**



**HCD2 / AHCD2**



**Table 1: HCD1 / HCD2 Dimensional Data - Imperial (in.) / Metric [mm]**

Size	D (duct)	A	B	C	E	F	H (VCS3)	H (VCS5)	Optional Damper Nom. Width (VCS3)	Optional Damper Nom. Width (VCS5)
6	6 <sup>5</sup> / <sub>8</sub> [168]	8 <sup>3</sup> / <sub>8</sub> [213]	3 <sup>3</sup> / <sub>8</sub> [86]	3 [76]	1 <sup>11</sup> / <sub>16</sub> [43]	3 <sup>3</sup> / <sub>8</sub> [98]	4 <sup>7</sup> / <sub>16</sub> [113]	5 <sup>11</sup> / <sub>16</sub> [144]	4 <sup>1</sup> / <sub>8</sub> [105]	4 [102]
10	10 <sup>3</sup> / <sub>8</sub> [264]	12 <sup>1</sup> / <sub>8</sub> [308]	5 <sup>7</sup> / <sub>8</sub> [149]	6 [152]	2 <sup>7</sup> / <sub>16</sub> [62]	6 [152]	5 <sup>13</sup> / <sub>16</sub> [148]	7 <sup>1</sup> / <sub>16</sub> [179]	6 <sup>23</sup> / <sub>32</sub> [171]	7 [178]
12	12 <sup>1</sup> / <sub>4</sub> [311]	14 [356]	6 <sup>7</sup> / <sub>8</sub> [175]	6 [152]	3 [76]	6 <sup>1</sup> / <sub>16</sub> [154]	5 <sup>1</sup> / <sub>4</sub> [133]	6 <sup>1</sup> / <sub>2</sub> [165]	7 <sup>13</sup> / <sub>16</sub> [199]	8 [203]
15	15 <sup>3</sup> / <sub>8</sub> [391]	17 <sup>3</sup> / <sub>16</sub> [437]	9 <sup>13</sup> / <sub>16</sub> [249]	6 [152]	3 <sup>3</sup> / <sub>16</sub> [97]	7 <sup>9</sup> / <sub>16</sub> [192]	6 [152]	7 <sup>1</sup> / <sub>4</sub> [184]	10 <sup>1</sup> / <sub>32</sub> [263]	10 [254]

**Table 2: AHCD1 / AHCD2 Dimensional Data - Imperial (in.) / Metric [mm]**

Size	D (duct)	A	B	C	E	F	H (VCS3)	H (VCS5)	Optional Damper Nom. Width (VCS3)	Optional Damper Nom. Width (VCS5)
6	7 <sup>1</sup> / <sub>16</sub> [179]	8 <sup>9</sup> / <sub>16</sub> [211]	3 <sup>3</sup> / <sub>8</sub> [86]	3 [76]	1 <sup>11</sup> / <sub>16</sub> [43]	3 <sup>3</sup> / <sub>8</sub> [98]	4 <sup>7</sup> / <sub>16</sub> [113]	5 <sup>11</sup> / <sub>16</sub> [144]	4 <sup>1</sup> / <sub>8</sub> [105]	4 [102]
10	10 <sup>3</sup> / <sub>4</sub> [273]	12 [305]	5 <sup>7</sup> / <sub>8</sub> [149]	6 [152]	2 <sup>7</sup> / <sub>16</sub> [62]	6 [152]	5 <sup>13</sup> / <sub>16</sub> [148]	7 <sup>1</sup> / <sub>16</sub> [179]	6 <sup>23</sup> / <sub>32</sub> [171]	7 [178]
12	12 <sup>5</sup> / <sub>8</sub> [321]	13 <sup>7</sup> / <sub>8</sub> [352]	6 <sup>7</sup> / <sub>8</sub> [175]	6 [152]	3 [76]	6 <sup>1</sup> / <sub>16</sub> [154]	5 <sup>1</sup> / <sub>4</sub> [133]	6 <sup>1</sup> / <sub>2</sub> [165]	7 <sup>13</sup> / <sub>16</sub> [199]	8 [203]
15	15 <sup>13</sup> / <sub>16</sub> [402]	17 [432]	9 <sup>13</sup> / <sub>16</sub> [249]	6 [152]	3 <sup>3</sup> / <sub>16</sub> [97]	7 <sup>9</sup> / <sub>16</sub> [192]	6 [152]	7 <sup>1</sup> / <sub>4</sub> [184]	10 <sup>9</sup> / <sub>16</sub> [262]	10 [254]

**Table 3: Available Duct Diameters for optional Spiral Duct Frame**

Nom. Size Width	Duct Diameter														
	10"	12"	14"	18"	20"	24"	26"	28"	30"	32"	34"	36"	40"	42"	48"
6	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
10	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	N/A	N/A
12	N/A	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
15	N/A	N/A	N/A	N/A	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼

# High Capacity Drum Louver Diffuser HCD Series



## Performance Data

Size	Duct Velocity, fpm		300	400	500	600	700	800	900	1000	1200
	Velocity	Pressure, in.wg.	0.006	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090
6/9	Total Pressure, in.wg.		0.046	0.077	0.123	0.169	0.238	0.308	0.384	0.477	0.692
	Flow Rate, cfm		113	150	188	225	263	300	338	375	450
	NC		--	--	18	24	29	34	38	42	48
	Throw 150, 100, 50		15-20-29	19-24-33	21-26-37	24-29-41	25-31-44	27-33-47	29-35-50	30-37-53	33-41-58
6/12	Total Pressure, in.wg.		0.042	0.070	0.112	0.154	0.216	0.279	0.349	0.433	0.628
	Flow Rate, cfm		150	200	250	300	350	400	450	500	600
	NC		--	--	19	25	30	35	39	43	49
	Throw 150, 100, 5		16-24-33	22-27-38	25-30-43	27-33-47	29-36-51	31-38-54	33-41-58	35-43-61	38-47-67
6/15	Total Pressure, in.wg.		0.039	0.065	0.104	0.142	0.201	0.259	0.324	0.401	0.582
	Flow Rate, cfm		188	250	313	375	438	500	563	625	750
	NC		--	--	19	26	31	36	40	44	50
	Throw 150, 100, 50		18-26-37	24-30-43	28-34-48	30-37-53	33-40-57	35-43-61	37-46-64	39-48-68	43-53-74
6/18	Total Pressure, in.wg.		0.037	0.061	0.097	0.134	0.189	0.243	0.304	0.377	0.548
	Flow Rate, cfm		225	300	375	450	525	600	675	750	900
	NC		--	--	20	26	32	36	40	44	51
	Throw 150, 100, 50		19-29-41	26-33-47	30-37-53	33-41-58	36-44-62	38-47-67	41-50-71	43-53-74	47-58-81
6/24	Total Pressure, in.wg.		0.033	0.055	0.088	0.121	0.171	0.221	0.276	0.342	0.497
	Flow Rate, cfm		300	400	500	600	700	800	900	1000	1200
	NC		--	--	21	27	32	37	41	45	51
	Throw 150, 100, 50		21-32-47	29-38-54	35-43-61	38-47-67	41-51-72	44-54-77	47-58-81	50-61-86	54-67-94
6/30	Total Pressure, in.wg.		0.031	0.051	0.082	0.113	0.159	0.205	0.256	0.318	0.461
	Flow Rate, cfm		375	500	625	750	875	1000	1125	1250	1500
	NC		--	--	21	28	33	38	42	46	52
	Throw 150, 100, 50		23-35-53	31-43-61	39-48-68	43-53-74	46-57-80	50-61-86	53-64-91	55-68-96	61-74-105
6/36	Total Pressure, in.wg.		0.029	0.048	0.077	0.106	0.149	0.193	0.241	0.299	0.433
	Flow Rate, cfm		450	600	750	900	1050	1200	1350	1500	1800
	NC		--	--	22	28	34	38	43	46	53
	Throw 150, 100, 50		25-38-58	34-47-67	42-53-74	47-58-81	51-62-88	54-67-94	58-71-100	61-74-105	67-81-115
6/42	Total Pressure, in.wg.		0.027	0.046	0.073	0.101	0.142	0.183	0.229	0.283	0.411
	Flow Rate, cfm		525	700	875	1050	1225	1400	1575	1750	2100
	NC		--	--	22	29	34	39	43	47	53
	Throw 150, 100, 50		27-40-62	36-51-72	45-57-80	51-62-88	55-67-95	59-72-102	62-76-108	66-80-114	72-88-124
6/48	Total Pressure, in.wg.		0.026	0.044	0.070	0.096	0.135	0.175	0.218	0.271	0.393
	Flow Rate, cfm		600	800	1000	1200	1400	1600	1800	2000	2400
	NC		--	--	23	29	35	39	43	47	54
	Throw 150, 100, 50		28-42-67	38-54-77	47-61-86	54-67-94	59-72-102	63-77-109	67-81-115	70-86-121	77-94-133
6/54	Total Pressure, in.wg.		0.025	0.042	0.067	0.092	0.130	0.168	0.210	0.260	0.378
	Flow Rate, cfm		675	900	1125	1350	1575	1800	2025	2250	2700
	NC		--	15	23	29	35	40	44	47	54
	Throw 150, 100, 50		29-44-71	39-58-81	49-64-91	58-71-100	62-76-108	67-81-115	71-86-122	74-91-129	81-100-141
6/60	Total Pressure, in.wg.		0.024	0.041	0.065	0.089	0.126	0.162	0.203	0.251	0.365
	Flow Rate, cfm		750	1000	1250	1500	1750	2000	2250	2500	3000
	NC		--	16	23	30	35	40	44	48	54
	Throw 150, 100, 50		31-46-74	41-61-86	51-68-96	61-74-105	66-80-114	70-86-121	74-91-129	78-96-136	86-105-149

### Performance Notes:

1. Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
2. Air flow is in cfm.
3. All pressures are in in. wg.
4. The NC values are based on a room absorption of 10 dB re 10<sup>-12</sup> watts and one diffuser.
5. Blanks (—) indicate an NC level below 15.
6. Throw data is based on supply air and room air being at isothermal conditions.

7. Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).

### Correction Factors

Model Deflection	HCD1			HCD2		
	0°	15°	30°	0°	15°	30°
NC	—	+4	+9	—	+4	+9
Throw	—	x .85	x .73	—	x .85	x .73
Total Press.	—	x 1.5	x 1.9	x 1.3	x 1.7	x 2.2

Based on HCD1 at 0° deflection, correction factors for other conditions as listed in table opposite.

**Example:** 12 x 36 HCD2  
 Flow Rate = 1800 cfm  
 Deflection = 15°  
 NC = 30 + 4 = 34  
 Throw (50 fpm) = 115 x .85 = 98 ft  
 Total Pressure = .086 x 1.7 = 0.146 in. w.g.

8. For units with dampers, add 7 to the NC, and multiply static pressure by 1.18.

# High Capacity Drum Louver Diffuser HCD Series



## Performance Data

Size	Duct Velocity, fpm	300	400	500	600	700	800	900	1000	1200
	Velocity Pressure, in.wg.	0.006	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090
10/18	Total Pressure, in.wg.	0.031	0.051	0.082	0.113	0.159	0.205	0.256	0.318	0.461
	Flow Rate, cfm	375	500	625	750	875	1000	1125	1250	1500
	NC	--	--	21	28	33	38	42	46	52
	Throw 150, 100, 50	23-35-53	31-43-61	39-48-68	43-53-74	46-57-80	50-61-86	53-64-91	55-68-96	61-74-105
10/24	Total Pressure, in.wg.	0.028	0.046	0.074	0.102	0.144	0.186	0.232	0.288	0.418
	Flow Rate, cfm	500	667	833	1000	1167	1333	1500	1667	2000
	NC	--	--	22	29	34	39	43	47	53
	Throw 150, 100, 50	26-39-61	35-50-70	44-55-78	50-61-86	54-66-93	57-70-99	61-74-105	64-78-111	70-86-121
10/30	Total Pressure, in.wg.	0.026	0.043	0.069	0.095	0.134	0.172	0.216	0.267	0.388
	Flow Rate, cfm	625	833	1042	1250	1458	1667	1875	2083	2500
	NC	--	--	23	29	35	39	44	47	54
	Throw 150, 100, 50	29-43-68	38-55-78	48-62-88	55-68-96	60-73-104	64-78-111	68-83-118	72-88-124	78-96-136
10/36	Total Pressure, in.wg.	0.024	0.041	0.065	0.089	0.126	0.162	0.203	0.251	0.365
	Flow Rate, cfm	750	1000	1250	1500	1750	2000	2250	2500	3000
	NC	--	16	23	30	35	40	44	48	54
	Throw 150, 100, 50	31-46-74	41-61-86	51-68-96	61-74-105	66-80-114	70-86-121	74-91-129	78-96-136	86-105-149
10/42	Total Pressure, in.wg.	0.023	0.038	0.062	0.085	0.119	0.154	0.192	0.239	0.346
	Flow Rate, cfm	875	1167	1458	1750	2042	2333	2625	2917	3500
	NC	--	16	24	30	36	40	45	48	55
	Throw 150, 100, 50	33-49-80	43-65-93	54-73-104	65-80-114	71-87-123	76-93-131	80-98-139	85-104-147	93-114-161
10/48	Total Pressure, in.wg.	0.022	0.037	0.059	0.081	0.114	0.147	0.184	0.228	0.331
	Flow Rate, cfm	1000	1333	1667	2000	2333	2667	3000	3333	4000
	NC	--	16	24	31	36	41	45	49	55
	Throw 150, 100, 50	34-52-86	46-69-99	57-78-111	69-86-121	76-93-131	81-99-140	86-105-149	91-111-157	99-121-172
10/54	Total Pressure, in.wg.	0.021	0.035	0.057	0.078	0.110	0.141	0.177	0.219	0.318
	Flow Rate, cfm	1125	1500	1875	2250	2625	3000	3375	3750	4500
	NC	--	17	25	31	36	41	45	49	55
	Throw 150, 100, 50	36-54-91	48-72-105	60-83-118	72-91-129	80-98-139	86-105-149	91-112-158	96-118-166	105-129-182
10/60	Total Pressure, in.wg.	0.020	0.034	0.055	0.075	0.106	0.136	0.171	0.211	0.307
	Flow Rate, cfm	1250	1667	2083	2500	2917	3333	3750	4167	5000
	NC	--	17	25	31	37	41	46	49	56
	Throw 150, 100, 50	37-56-96	50-75-111	62-88-124	75-96-136	85-104-147	91-111-157	96-118-166	101-124-175	111-136-192
10/66	Total Pressure, in.wg.	0.020	0.033	0.053	0.073	0.102	0.132	0.165	0.205	0.297
	Flow Rate, cfm	1375	1833	2292	2750	3208	3667	4125	4583	5500
	NC	--	17	25	32	37	42	46	50	56
	Throw 150, 100, 50	39-58-101	52-78-116	65-92-130	78-101-142	89-109-154	95-116-164	101-123-174	106-130-184	116-142-201
10/72	Total Pressure, in.wg.	0.019	0.032	0.051	0.071	0.099	0.128	0.160	0.199	0.289
	Flow Rate, cfm	1500	2000	2500	3000	3500	4000	4500	5000	6000
	NC	--	18	26	32	37	42	46	50	56
	Throw 150, 100, 50	40-60-105	54-81-121	67-96-136	81-105-149	93-114-161	99-121-172	105-129-182	111-136-192	121-149-210

### Performance Notes:

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- Air flow is in cfm.
- All pressures are in in. w.g.
- The NC values are based on a room absorption of 10 dB re 10<sup>-12</sup> watts and one diffuser.
- Blanks (—) indicate an NC level below 15.
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).

### Correction Factors

Model Deflection	HCD1			HCD2		
	0°	15°	30°	0°	15°	30°
NC	—	+4	+9	—	+4	+9
Throw	—	x .85	x .73	—	x .85	x .73
Total Press.	—	x 1.5	x 1.9	x 1.3	x 1.7	x 2.2

Based on HCD1 at 0° deflection, correction factors for other conditions as listed in table opposite.

### Example:

12 x 36 HCD2  
Flow Rate = 1800 cfm  
Deflection = 15°  
NC = 30 + 4 = 34  
Throw (50 fpm) = 115 x .85 = 98 ft  
Total Pressure = .086 x 1.7 = 0.146 in. w.g.

- For units with dampers, add 7 to the NC, and multiply static pressure by 1.18.

## Performance Data

Size	Duct Velocity, fpm	300	400	500	600	700	800	900	1000	1200
	Velocity Pressure, in.wg.	0.006	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090
12/18	Total Pressure, in.wg.	0.029	0.048	0.077	0.106	0.149	0.193	0.241	0.299	0.433
	Flow Rate, cfm	450	600	750	900	1050	1200	1350	1500	1800
	NC	--	--	22	28	34	38	43	46	53
	Throw 150, 100, 50	25-38-58	34-47-67	42-53-74	47-58-81	51-62-88	54-67-94	58-71-100	61-74-105	67-81-115
12/24	Total Pressure, in.wg.	0.026	0.044	0.070	0.096	0.135	0.175	0.218	0.271	0.393
	Flow Rate, cfm	600	800	1000	1200	1400	1600	1800	2000	2400
	NC	--	--	23	29	35	39	43	47	54
	Throw 150, 100, 50	28-42-67	38-54-77	47-61-86	54-67-94	59-72-102	63-77-109	67-81-115	70-86-121	77-94-133
12/30	Total Pressure, in.wg.	0.024	0.041	0.065	0.089	0.126	0.162	0.203	0.251	0.365
	Flow Rate, cfm	750	1000	1250	1500	1750	2000	2250	2500	3000
	NC	--	16	23	30	35	40	44	48	54
	Throw 150, 100, 50	31-46-74	41-61-86	51-68-96	61-74-105	66-80-114	70-86-121	74-91-129	78-96-136	86-105-149
12/36	Total Pressure, in.wg.	0.023	0.038	0.061	0.084	0.118	0.152	0.191	0.236	0.343
	Flow Rate, cfm	900	1200	1500	1800	2100	2400	2700	3000	3600
	NC	--	16	24	30	36	40	45	48	55
	Throw 150, 100, 50	33-49-81	44-66-94	55-74-105	66-81-115	72-88-124	77-94-133	81-100-141	86-105-149	94-115-163
12/42	Total Pressure, in.wg.	0.022	0.036	0.058	0.080	0.112	0.145	0.181	0.224	0.326
	Flow Rate, cfm	1050	1400	1750	2100	2450	2800	3150	3500	4200
	NC	--	17	24	31	36	41	45	49	55
	Throw 150, 100, 50	35-53-88	47-70-102	58-80-114	70-88-124	78-95-134	83-102-144	88-108-152	93-114-161	102-124-176
12/48	Total Pressure, in.wg.	0.021	0.035	0.055	0.076	0.107	0.138	0.173	0.214	0.311
	Flow Rate, cfm	1200	1600	2000	2400	2800	3200	3600	4000	4800
	NC	--	17	25	31	37	41	46	49	56
	Throw 150, 100, 50	37-55-94	49-74-109	62-86-121	74-94-133	83-102-144	89-109-154	94-115-163	99-121-172	109-133-188
12/54	Total Pressure, in.wg.	0.020	0.033	0.053	0.073	0.103	0.133	0.166	0.206	0.299
	Flow Rate, cfm	1350	1800	2250	2700	3150	3600	4050	4500	5400
	NC	--	17	25	32	37	42	46	50	56
	Throw 150, 100, 50	39-58-100	52-77-115	64-91-129	77-100-141	88-108-152	94-115-163	100-122-173	105-129-182	115-141-200
12/60	Total Pressure, in.wg.	0.019	0.032	0.051	0.071	0.099	0.128	0.160	0.199	0.289
	Flow Rate, cfm	1500	2000	2500	3000	3500	4000	4500	5000	6000
	NC	--	18	26	32	37	42	46	50	56
	Throw 150, 100, 50	40-60-105	54-81-121	67-96-136	81-105-149	93-114-161	99-121-172	105-129-182	111-136-192	121-149-210
12/66	Total Pressure, in.wg.	0.019	0.031	0.050	0.068	0.096	0.124	0.155	0.193	0.280
	Flow Rate, cfm	1650	2200	2750	3300	3850	4400	4950	5500	6600
	NC	--	18	26	32	38	42	46	50	57
	Throw 150, 100, 50	42-63-110	56-84-127	70-101-142	84-110-156	97-119-168	104-127-180	110-135-191	116-142-201	127-156-221
12/72	Total Pressure, in.wg.	0.018	0.030	0.048	0.066	0.093	0.121	0.151	0.187	0.271
	Flow Rate, cfm	1800	2400	3000	3600	4200	4800	5400	6000	7200
	NC	--	18	26	32	38	43	47	50	57
	Throw 150, 100, 50	43-65-115	58-87-133	72-105-149	87-115-163	101-124-176	109-133-188	115-141-200	121-149-210	133-163-230

### Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- Air flow is in cfm.
- All pressures are in in. w.g.
- The NC values are based on a room absorption of 10 dB re 10<sup>-12</sup> watts and one diffuser.
- Blanks (—) indicate an NC level below 15.
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).

### Correction Factors

Model Deflection	HCD1			HCD2		
	0°	15°	30°	0°	15°	30°
NC	—	+4	+9	—	+4	+9
Throw	—	x .85	x .73	—	x .85	x .73
Total Press.	—	x 1.5	x 1.9	x 1.3	x 1.7	x 2.2

Based on HCD1 at 0° deflection, correction factors for other conditions as listed in table opposite.

- Example:** 12 x 36 HCD2  
 Flow Rate = 1800 cfm  
 Deflection = 15°  
 NC = 30 + 4 = 34  
 Throw (50 fpm) = 115 x .85 = 98 ft  
 Total Pressure = .086 x 1.7 = 0.146 in. w.g.
- For units with dampers, add 7 to the NC, and multiply static pressure by 1.18.

# High Capacity Drum Louver Diffuser HCD Series



## Performance Data

Size	Duct Velocity, fpm	300	400	500	600	700	800	900	1000	1200
	Velocity Pressure, in.wg.	0.006	0.010	0.016	0.022	0.031	0.040	0.050	0.062	0.090
15/18	Total Pressure, in.wg.	0.027	0.045	0.071	0.098	0.138	0.179	0.223	0.277	0.402
	Flow Rate, cfm	563	750	938	1125	1313	1500	1688	1875	2250
	NC	--	--	23	29	34	39	43	47	53
	Throw 150, 100, 50	27-41-64	37-53-74	46-59-83	53-64-91	57-70-98	61-74-105	64-79-112	68-83-118	74-91-129
15/24	Total Pressure, in.wg.	0.024	0.041	0.065	0.089	0.126	0.162	0.203	0.251	0.365
	Flow Rate, cfm	750	1000	1250	1500	1750	2000	2250	2500	3000
	NC	--	16	23	30	35	40	44	48	54
	Throw 150, 100, 50	31-46-74	41-61-86	51-68-96	61-74-105	66-80-114	70-86-121	74-91-129	78-96-136	86-105-149
15/30	Total Pressure, in.wg.	0.023	0.038	0.060	0.083	0.117	0.150	0.188	0.233	0.338
	Flow Rate, cfm	938	1250	1563	1875	2188	2500	2813	3125	3750
	NC	--	16	24	30	36	41	45	48	55
	Throw 150, 100, 50	34-50-83	45-67-96	56-76-107	67-83-118	73-90-127	78-96-136	83-102-144	88-107-152	96-118-166
15/36	Total Pressure, in.wg.	0.021	0.035	0.057	0.078	0.110	0.141	0.177	0.219	0.318
	Flow Rate, cfm	1125	1500	1875	2250	2625	3000	3375	3750	4500
	NC	--	17	25	31	36	41	45	49	55
	Throw 150, 100, 50	36-54-91	48-72-105	60-83-118	72-91-129	80-98-139	86-105-149	91-112-158	96-118-166	105-129-182
15/42	Total Pressure, in.wg.	0.020	0.034	0.054	0.074	0.104	0.134	0.168	0.208	0.302
	Flow Rate, cfm	1313	1750	2188	2625	3063	3500	3938	4375	5250
	NC	--	17	25	32	37	42	46	49	56
	Throw 150, 100, 50	38-57-98	51-76-114	64-90-127	76-98-139	87-106-150	93-114-161	98-120-170	104-127-180	114-139-197
15/48	Total Pressure, in.wg.	0.019	0.032	0.051	0.071	0.099	0.128	0.160	0.199	0.289
	Flow Rate, cfm	1500	2000	2500	3000	3500	4000	4500	5000	6000
	NC	--	18	26	32	37	42	46	50	56
	Throw 150, 100, 50	40-60-105	54-81-121	67-96-136	81-105-149	93-114-161	99-121-172	105-129-182	111-136-192	121-149-210
15/54	Total Pressure, in.wg.	0.018	0.031	0.049	0.068	0.096	0.123	0.154	0.191	0.277
	Flow Rate, cfm	1688	2250	2813	3375	3938	4500	5063	5625	6750
	NC	--	18	26	32	38	42	47	50	57
	Throw 150, 100, 50	42-63-112	56-84-129	70-102-144	84-112-158	98-120-170	105-129-182	112-137-193	118-144-204	129-158-223
15/60	Total Pressure, in.wg.	0.018	0.030	0.048	0.065	0.092	0.119	0.149	0.184	0.268
	Flow Rate, cfm	1875	2500	3125	3750	4375	5000	5625	6250	7500
	NC	--	18	26	33	38	43	47	51	57
	Throw 150, 100, 50	44-66-118	59-88-136	73-107-152	88-118-166	103-127-180	111-136-192	118-144-204	124-152-215	136-166-235
15/66	Total Pressure, in.wg.	0.017	0.029	0.046	0.063	0.089	0.115	0.144	0.179	0.259
	Flow Rate, cfm	2063	2750	3438	4125	4813	5500	6188	6875	8250
	NC	--	19	26	33	38	43	47	51	57
	Throw 150, 100, 50	46-68-123	61-91-142	76-113-159	91-123-174	106-133-188	116-142-201	123-151-214	130-159-225	142-174-247
15/72	Total Pressure, in.wg.	0.017	0.028	0.045	0.062	0.087	0.112	0.140	0.173	0.252
	Flow Rate, cfm	2250	3000	3750	4500	5250	6000	6750	7500	9000
	NC	--	19	27	33	39	43	47	51	58
	Throw 150, 100, 50	47-71-129	63-94-149	79-118-166	94-129-182	110-139-197	121-149-210	129-158-223	136-166-235	149-182-258

### Performance Notes:

- Tested in accordance with ASHRAE Standard 70-2006 "Method of Testing for Rating the Performance of Air Outlets and Inlets."
- Air flow is in cfm.
- All pressures are in in. w.g.
- The NC values are based on a room absorption of 10 dB re 10<sup>-12</sup> watts and one diffuser.
- Blanks (—) indicate an NC level below 15.
- Throw data is based on supply air and room air being at isothermal conditions.
- Throw values are measured in feet for terminal velocities of 150 fpm (minimum), 100 fpm (middle) and 50 fpm (maximum).

### Correction Factors

Model Deflection	HCD1			HCD2		
	0°	15°	30°	0°	15°	30°
NC	—	+4	+9	—	+4	+9
Throw	—	x .85	x .73	—	x .85	x .73
Total Press.	—	x 1.5	x 1.9	x 1.3	x 1.7	x 2.2

Based on HCD1 at 0° deflection, correction factors for other conditions as listed in table opposite.

**Example:** 12 x 36 HCD2

Flow Rate = 1800 cfm

Deflection = 15°

NC = 30 + 4 = 34

Throw (50 fpm) = 115 x .85 = 98 ft

Total Pressure = .086 x 1.7 = 0.146 in. w.g.

- For units with dampers, add 7 to the NC, and multiply static pressure by 1.18.

## Industrial Grilles

### Modular Core MIG Industrial Supply Grilles

Furnish and install Price model MIG supply grilles of the sizes and mounting types indicated on the plans and outlet schedule. The outlets shall consist of single or multiple square double deflection grilles mounted to a heavy gauge steel frame with quick-release fasteners. Grilles shall be double deflection type with two sets of fully adjustable blades spaced 1 1/4 in. [32] deep streamlined deflection blades spaced 1 1/2 in. [38] on centre. The front set of blades shall run parallel to the (long/short) dimension of the grille, as indicated in the outlet schedule when shipped from the factory. Individually adjustable blades shall index and lock into position at 0, 15, 30 and 45 degree deflection. Blades and grille shall be of heavy extruded aluminum construction. The grille shall be finished in (B12 White Powder Coat / B15 Aluminum Powder Coat). Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714.

### High Capacity Drum Louvers HCD1

Furnish and install Price model HCD1 supply outlets of the sizes and models indicated on the plans and outlet schedule. The outlets shall consist of individually adjustable spread control vanes housed within a rotatable drum. Curved outer drum and vanes shall be extruded aluminum, other components shall be steel. The drum pivot mechanism shall incorporate a positive positioning detent device to hold field adjusted drum angles of up to 30° off center. Adjustable vanes are to pivot and maintain blade setting. The border shall be constructed of formed steel with welded, reinforced corners for extra strength. Screw holes shall be countersunk for aesthetic appeal. The unit shall be finished in (B12 White Powder Coat / B15 Aluminum Powder Coat). Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. The optional integral volume control damper shall be of the opposed blade type and shall be constructed of cold rolled steel. The damper shall be operable from the register face. The damper shall be coated steel.

Or: The optional Heavy Duty balancing damper shall be of opposed blade type and shall be constructed from a minimum 18 gage thick cold rolled steel. Damper frame corners shall overlap and be of welded construction for added strength. The damper shall be operable from the register face. The damper shall come fitted with a face accessible screw type blade locking mechanism. The damper shall be coated steel.

### HCD2

Furnish and install Price model HCD2 supply outlets of the sizes and models indicated on the plans and outlet schedule. The outlets shall consist of individually adjustable spread control vanes housed within a rotatable drum. The vanes shall be bisected by a center divider, allowing separate adjustment of top and bottom blades. The end panels of the drum shall incorporate spread control members to enhance pattern control. Curved outer drum and vanes shall be extruded aluminum, other components shall be steel. The drum pivot mechanism shall incorporate a positive positioning detent device to hold field adjusted drum angles of up to 30° off center. Adjustable vanes are to pivot and maintain blade setting. The border shall be constructed of formed steel with welded, reinforced corners for extra strength. Screw holes shall be countersunk for aesthetic appeal. The unit shall be finished in (B12 White Powder Coat / B15 Aluminum Powder Coat). Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. The optional integral volume control damper shall be of the opposed blade type and shall be constructed of cold rolled steel. The damper shall be operable from the register face. The damper shall be coated steel.

Or: The optional Heavy Duty balancing damper shall be of opposed blade type and shall be constructed from a minimum 18 gage thick cold rolled steel. Damper frame corners shall overlap and be of welded construction for added strength. The damper shall be operable from the register face. The damper shall come fitted with a face accessible screw type blade locking mechanism. The damper shall be coated steel.

## Industrial Grilles

### AHCD1

Furnish and install Price model AHCD1 supply outlets of the sizes and models indicated on the plans and outlet schedule. The outlets shall consist of individually adjustable spread control vanes housed within a rotatable drum. Drum, frame and vanes shall be aluminum construction. The drum pivot mechanism shall incorporate a positive positioning detent device to hold field adjusted drum angles of up to 30° off center. Adjustable vanes are to pivot and maintain blade setting. The border shall be constructed of formed steel with welded, reinforced corners for extra strength. Screw holes shall be countersunk for aesthetic appeal. The unit shall be finished in (B12 White Powder Coat / B15 Aluminum Powder Coat). The optional integral volume control damper shall be of the opposed blade type and shall be constructed of cold rolled steel. The damper shall be operable from the register face. The damper shall be coated steel.

Or: The optional Heavy Duty balancing damper shall be of opposed blade type and shall be constructed from a minimum 18 gage thick cold rolled steel. Damper frame corners shall overlap and be of welded construction for added strength. The damper shall be operable from the register face. The damper shall come fitted with a face accessible screw type blade locking mechanism. The damper shall be coated steel.

### AHCD2

Furnish and install Price model AHCD2 supply outlets of the sizes and models indicated on the plans and outlet schedule. The outlets shall consist of individually adjustable spread control vanes housed within a rotatable drum. The vanes shall be bisected by a center divider, allowing separate adjustment of top and bottom blades. The end panels of the drum shall incorporate spread control members to enhance pattern control. Drum, frame and vanes shall be aluminum construction. The drum pivot mechanism shall incorporate a positive positioning detent device to hold field adjusted drum angles of up to 30° off center. Adjustable vanes are to pivot and maintain blade setting. The border shall be constructed of formed steel with welded, reinforced corners for extra strength. Screw holes shall be countersunk for aesthetic appeal. The unit shall be finished in (B12 White Powder Coat / B15 Aluminum Powder Coat). Paint finish shall pass 500 hours of salt spray exposure with no measurable creep in accordance with ASTM D1654 and 1000 hours with no rusting or blistering as per ASTM D610 and ASTM D714. The optional integral volume control damper shall be of the opposed blade type and shall be constructed of cold rolled steel. The damper shall be operable from the register face. The damper shall be coated steel.

Or: The optional Heavy Duty balancing damper shall be of opposed blade type and shall be constructed from a minimum 18 gage thick cold rolled steel. Damper frame corners shall overlap and be of welded construction for added strength. The damper shall be operable from the register face. The damper shall come fitted with a face accessible screw type blade locking mechanism. The damper shall be coated steel.