

Air Movement SOURCE BOOK

ACME AIR MOVING SOLUTIONS

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ACME

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Est. 1938



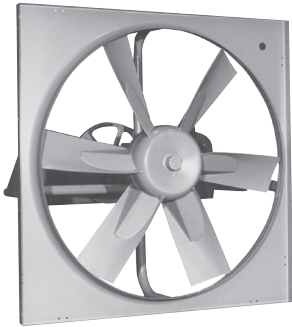
Est. 1938

Belt Drive Propeller Wall Fans

Models DCH

Includes the following Model/Options			
DCH	General Purpose Wall Prop Exhaust Fan	DCH-RWBP	Wall Housing Prop Supply Fan
DCH-R	General Purpose Wall Prop Supply Fan	DCH-WCP	Wall Collar Prop Exhaust Fan
DCH-WBP	Wall Housing Prop Exhaust Fan	DCH-RWCP	Wall Collar Prop Supply Fan

Model DCH is a belt drive high-performance heavy-duty propeller wall fan, with a capacity up to 77,240 CFM and a maximum SP of 0.25 (in. wg.). The DCH family of wall props were designed to meet today's demand for high performance heavy-duty wall fans. Typical application are in commercial and industrial buildings where either exhaust or supply air is needed.



Construction Features

Housing

- Frame is heavy wall steel tubing for structural strength
- Deep rolled, streamlined orifice for efficient performance
- Fan is designed to operate in any position

Coating

- All steel components shall have ACME-SEAL polyester powder coating

Propeller

- Percision balance heavy duty all welded steel propeller with cambered blades.
- Blades are welded to the hub.
- Non-overloading design maintains uniform horsepower requirement within catalog range of static pressures
- Precision balanced for smooth, quiet performance

Bearings

- Permanently lubricated in an Acme D.S. pillow block housing
- Bearings are resiliently mounted in neoprene rings
- Rated L50 life for 200,000 hours
- 5 year limited warranty on Acme D.S. pillow block bearings
- Size 72 uses heavy duty unitary pillow block bearings with a 2-year limited warranty

Drives

- Cast iron drives sized for 150% of drive horsepower
- Static free, oil and heat resistant belts
- Shafts have corrosion resistant coating

Motors

- Continuous duty type have sealed ball bearings for longer life
- Mounted on rails for convenient belt tension

Standard Construction Features	DCH	DCH-R	DCH-WBP	DCH-RWBP	DCH-WCP	DCH-RWCP
Welded Steel Tubing Frame	x	x	x	x	x	x
Streamlined Orifice	x	x	x	x	x	x
Steel Propeller	x	x	x	x	x	x
Bearings L50 Life of 200,000 Hours	x	x	x	x	x	x
Motor Side Guard			x	x		
Gravity Damper			x		x	
Motorized Damper				x		x
Wall Box			x	x		
Wall Collar					x	x
UL705	x	x	x	x	x	x

Listed models are available in all sizes and performance ranges

For submittals, detailed air and sound information, available options and accessories, please go to FANTastic!® Commercial www.acmefan.com.

Options/Accessories

- Disconnect Switches
- Safety Guards
- Dampers
- Coatings
- Weather Hood for both wall box and wall collar models



Acme Engineering & Manufacturing Corporation certifies that the models 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.



U.L. 705 Listed

Consult your Acme representative for availability.



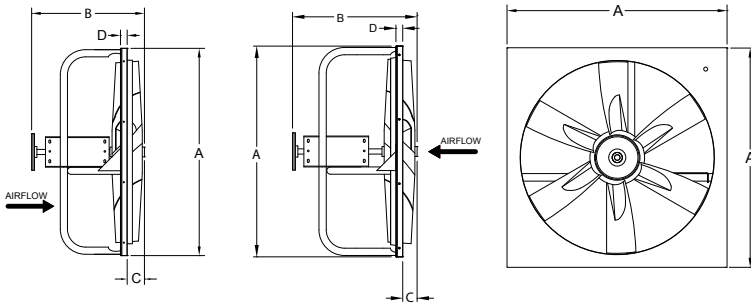
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Belt Drive Propeller Wall Fans

Models DCH

Exhaust Fan

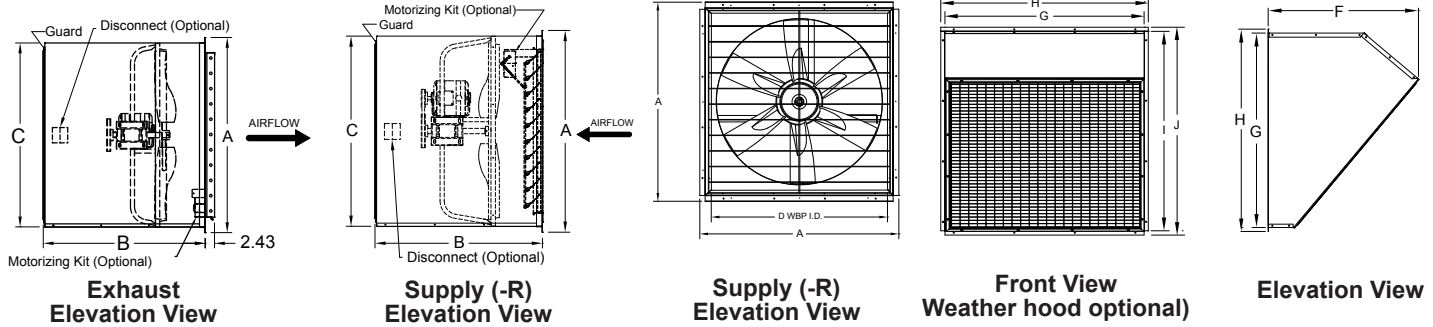
Supply Fan



Fan Model	A	B Max.		C		D
		Exhaust	Supply	Exhaust	Supply	
DCH42	48.00	26.13	28.38	4.00	2.13	1.50
DCH48	54.00	26.13	29.88	4.00	2.38	1.50
DCH54	60.00	26.13	28.38	4.00	2.63	1.50
DCH60	68.00	30.53	34.13	4.50	2.00	1.50
DCH72	80.00	33.25	33.25	6.00	2.50	2.00

Dimensions are shown in inches.

Acme's Wall Box Package

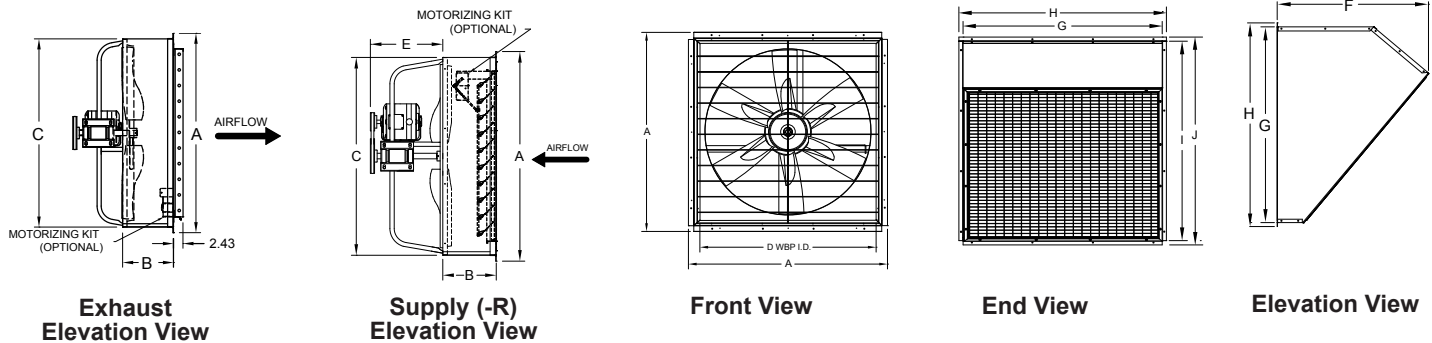


Fan Model	DCHWBP FAN					WHP (Weather Hood)				
	A	B	C*	D	E	F	G	H	I	J
DCHWBP42 (-R)	51.25	41.96	48.75	43.91	51.25	35.79	46.25	48.00	46.25	48.00
DCHWBP48 (-R)	57.25	43.04	54.75	49.91	57.25	40.75	52.25	54.00	52.25	54.00
DCHWBP54 (-R)	63.25	44.13	60.75	55.91	63.25	45.32	58.25	60.00	58.25	60.00
DCHWBP60 (-R)	71.25	50.09	68.75	63.91	71.25	51.66	66.25	68.00	66.25	68.00
DCHWBP72 (-R)	83.51	55.05	81.01	75.91	83.51	59.01	78.03	79.75	78.03	79.75

Dimensions are shown in inches.

*C Dimension includes allowances for fasteners and assembly tolerances

Acme's Wall Collar Package



Fan Model	DCHWCP FAN					Front View		WHP (Weather Hood)			
	A	B	C*	E	E (-R)	D	E (Front View)	F	G	H	J
DCHWCP42 (-R)	51.25	13.21	48.75	20.63	24.75	43.91	51.25	35.79	46.25	48.00	46.25
DCHWCP48 (-R)	57.25	12.65	54.75	20.63	26.00	49.91	57.25	40.75	52.25	54.00	52.25
DCHWCP54 (-R)	63.25	18.58	60.75	20.63	24.25	55.91	63.25	45.32	58.25	60.00	58.25
DCHWCP60 (-R)	71.25	12.83	68.75	24.53	30.63	63.91	71.25	51.66	66.25	68.00	66.25
DCHWCP72 (-R)	83.51	12.84	81.01	25.25	28.75	75.91	83.51	59.01	78.03	79.75	78.03

Dimensions are shown in inches.

*C Dimension includes allowances for fasteners and assembly tolerances

DCH42

PERFORMANCE DATA														
CFM and Sones vs. Static Pressure														
RPM	0.000"		0.050"		0.100"		0.125"		0.150"		0.200"		0.250"	
	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones
341	12383		11340		8441		7076		5884		2841			
	0.46	9.4	0.46	10.9	0.43	10.6	0.43	10.3	0.44	10.2	0.50	9.2		
525	19082		18463		17759		17354		16895		15712		12455	
	1.67	20	1.68	22	1.69	21	1.69	21	1.70	21	1.73	20	1.56	19.0
574	20865		20299		19675		19335		18965		18095		16738	
	2.19	24	2.19	26	2.20	25	2.20	26	2.21	25	2.23	24	2.26	24
661	24031		23540		23018		22741		22464		21825		21078	
	3.34	30	3.34	32	3.35	32	3.36	32	3.36	32	3.38	31	3.40	31

Fan Model	HP	RPM Range	Est. Unit Wt. lbs.	Est. Ship Wt. lbs.
DCH42	1-1/2	341 - 525	240	260
DC42	2	403 - 574	250	270
DCH42	3	540 - 661	270	290

DCH48

PERFORMANCE DATA														
CFM and Sones vs. Static Pressure														
RPM	0.000"		0.050"		0.100"		0.125"		0.150"		0.200"		0.250"	
	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones
286	16233		14636		12239		10094		7481					
	0.57	8.9	0.59	10.0	0.59	11.5	0.59	11.0	0.58	10.3				
404	22953		21824		20669		19943		19172		17266		14217	
	1.61	17.1	1.63	18.2	1.65	19.2	1.66	19.6	1.67	20	1.67	22	1.66	21
444	25230		24202		23153		22604		21943		20540		18600	
	2.13	19.6	2.16	21	2.18	22	2.20	22	2.21	22	2.22	23	2.21	24
509	28930		28033		27118		26660		26203		25089		23862	
	3.21	27	3.24	28	3.27	29	3.29	30	3.30	30	3.32	30	3.34	31
603	34279		33522		32749		32363		31977		31204		30320	
	5.34	37	5.38	38	5.41	39	5.43	40	5.45	40	5.48	41	5.51	40

Fan Model	HP	RPM Range	Est. Unit Wt. lbs.	Est. Ship Wt. lbs.
DCH48	1-1/2	286 - 404	260	285
DCH48	2	331 - 444	276	300
DCH48	3	338 - 509	290	315
DCH48	5	500 - 603	305	330

Performance certified is for Installation Type A - Free Inlet, Free Outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Brake horsepower capability of a fan motor is dependent on the degree of cooling the motor receives from the airstream moving over the motor. Motor loading beyond the motor nameplate rating does not overheat the motor and is within NEMA recommended limits. Therefore, it is not detrimental to motor and is economically desirable.

Model numbers shown are for Exhaust fans with standard direction of airflow (motor intake side of propeller). For Supply fans with direction of airflow reversed (motor on discharge side of propeller) add a "-R" between the model and the model size (ex. DCH-R42).

The sound ratings shown are loudness values in hemispherical sones at 1.5 m (5 ft) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for Installation Type B: free inlet hemispherical sone levels.

When a supply type fan is used, a center pivot damper type WAGCH is recommended.

DCH54

PERFORMANCE DATA														
CFM and Sones vs. Static Pressure														
RPM	0.000"		0.050"		0.100"		0.125"		0.150"		0.200"		0.250"	
	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones
238	20001		18185		11264		8192		3749					
	0.63	8.7	0.64	10.0	0.58	9.1	0.61	8.6	0.66	7.3				
332	27926		26660		25285		24077		21513		15179		10754	
	1.72	16.6	1.73	17.9	1.73	19.1	1.73	19.1	1.71	18.1	1.60	17.2	1.66	16.3
366	30791		29627		28469		27779		26650		20122		16111	
	2.30	19.4	2.31	21	2.31	22	2.31	22	2.32	22	2.13	21	2.18	20
419	35256		34226		33256		32737		32135		30342		24279	
	3.46	23	3.47	24	3.47	25	3.47	26	3.47	26	3.48	27	3.28	26
496	41742		40872		40018		39612		39207		38248		36994	
	5.73	26	5.75	26	5.76	27	5.76	28	5.76	28	5.76	28	5.77	28

Fan Model	HP	RPM Range	Est. Unit Wt. lbs.	Est. Ship Wt. lbs.
DCH54	1-1/2	238 - 332	375	400
DCH54	2	279 - 366	385	410
DCH54	3	308 - 419	405	435
DCH54	5	391 - 496	420	450

DCH60

PERFORMANCE DATA														
CFM and Sones vs. Static Pressure														
RPM	0.000"		0.050"		0.100"		0.125"		0.150"		0.200"		0.250"	
	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones
185	21317		18392		7170									
	0.50	4.0	0.51	4.5	0.49	3.5								
278	32075		30465		28353		26068		20163		14217		6493	
	1.71	8.8	1.71	9.5	1.72	9.6	1.72	9.5	1.56	8.5	1.66	8.2	1.78	7.0
306	35311		33857		32115		31038		29077		20392		14915	
	2.28	10.4	2.28	11.2	2.29	11.4	2.29	11.4	2.29	11.5	2.08	10.1	2.20	9.7
350	40397		39135		37800		36939		36024		32386		24402	
	3.41	13.3	3.42	14.2	3.42	14.6	3.42	14.6	3.42	14.6	3.43	14.5	3.09	13.0
415	47908		46844		45736		45172		44567		43069		41355	
	5.69	18.3	5.69	19.1	5.70	19.7	5.70	19.8	5.70	20	5.71	20	5.71	20
475	54840		53911		52960		52467		51974		50920		49616	
	8.53	23	8.53	24	8.54	25	8.54	25	8.55	25	8.55	25	8.56	26

Fan Model	HP	RPM Range	Est. Unit Wt. lbs.	Est. Ship Wt. lbs.
DCH60	1-1/2	185 - 278	520	550
DCH60	2	220 - 306	530	560
DCH60	3	240 - 350	555	585
DCH60	5	336 - 415	570	600
DCH60	7-1/2	378 - 475	610	640

Performance certified is for Installation Type A - Free Inlet, Free Outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

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Model numbers shown are for Exhaust fans with standard direction of airflow (motor intake side of propeller). For Supply fans with direction of airflow reversed (motor on discharge side of propeller) add a "R" between the model and the model size (ex. DCH-R42).

The sound ratings shown are loudness values in hemispherical sones at 1.5 m (5 ft) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for Installation Type B: free inlet hemispherical sone levels.

When a supply type fan is used, a center pivot damper type WAGCH is recommended.

DCH72

PERFORMANCE DATA														
CFM and Sones vs. Static Pressure														
RPM	0.000"		0.050"		0.100"		0.125"		0.150"		0.200"		0.250"	
	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones	BHP	Sones
169	33667		30116		16423		9689							
	0.96	3.4	0.96	3.9	0.92	3.2	0.95	2.9						
226	45058		42688		39361		33645		27204		18533		5891	
	2.29	6.3	2.29	6.7	2.30	6.9	2.24	6.5	2.07	6.1	2.20	5.8	2.47	4.4
259	51650		49638		47195		45585		42929		30723		23123	
	3.44	8.0	3.45	8.5	3.46	8.6	3.47	8.8	3.48	8.8	3.13	7.8	3.32	7.5
307	61236		59572		57689		56644		55511		52078		40420	
	5.73	10.8	5.74	11.4	5.74	11.5	5.75	11.4	5.76	11.8	5.79	12.0	5.28	10.7
351	70022		68566		66994		66150		65294		63312		60600	
	8.56	13.7	8.57	14.4	8.58	14.7	8.58	14.7	8.59	14.6	8.61	15.2	8.64	15.4
387	77209		75889		74525		73760		72995		71356		69558	
	11.48	16.5	11.48	17.2	11.49	17.5	11.50	17.6	11.50	17.7	11.52	17.8	11.54	18.2

Fan Model	HP	RPM Range	Est. Unit Wt. lbs.	Est. Ship Wt. lbs.
DCH72	2	169 - 226	775	825
DCH72	3	189 - 259	825	875
DCH72	5	238 - 307	840	890
DCH72	7-1/2	295 - 351	850	900
DCH72	10	326 - 387	900	950

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May 2025

Form C189K