



**REVERSOMATIC**  
MANUFACTURING LIMITED

Use Reversomatic fans when quality and performance come first

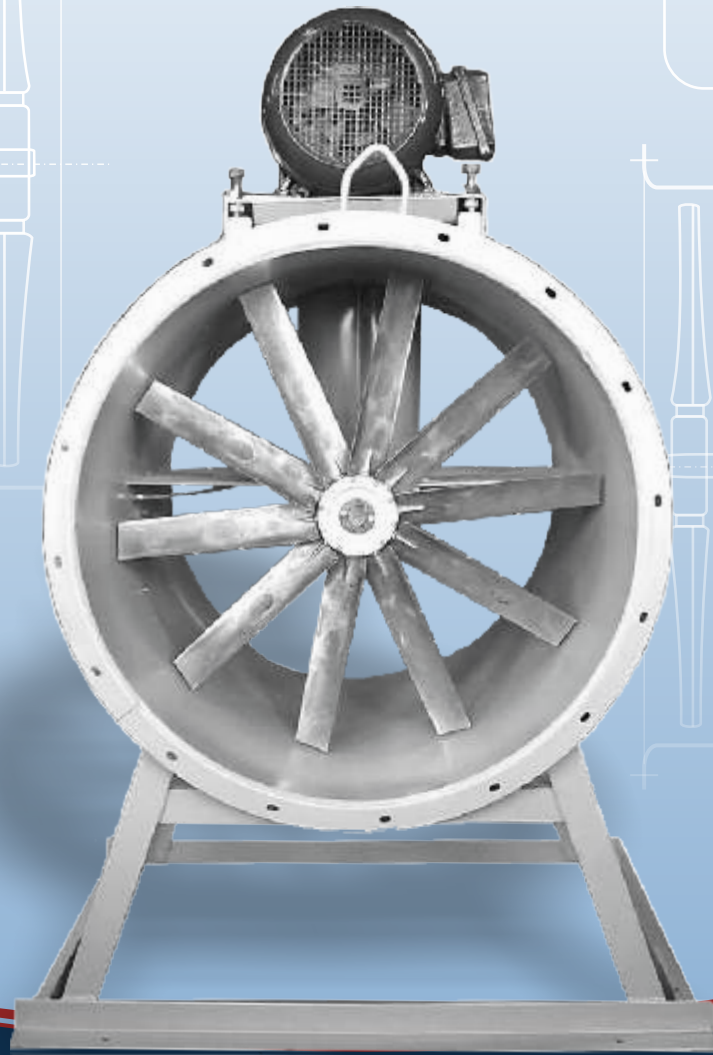
# AIRFOIL TUBEAXIAL FANS

Direct Drive  
Model

**RDD**

Belt Driven  
Model

**RBD**



Evaluated by UL as per UL 705  
(United State) and CSA Standard  
C22.2 No.113-M1984 (Canada).

Tubeaxial Fans are designed for use in low to medium pressure ducted applications. They are generally used for removal of contaminated air or hot air found in industrial applications; but can also be used to supply air through duct work for cooling or pressurizing of the interior spaces ie. Elevator Shaft and Stairwells for Condominiums. Tubeaxial fans are very versatile and compact for moving large volumes of air in duct systems having relatively low pressure losses.

# DIRECT DRIVE TUBEAXIAL FANS

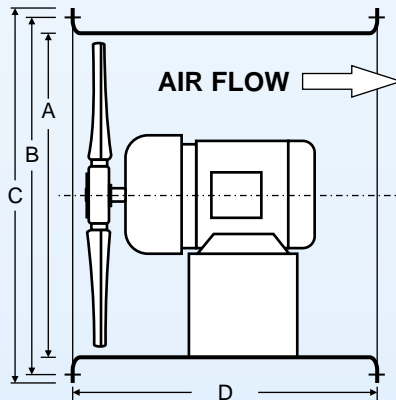
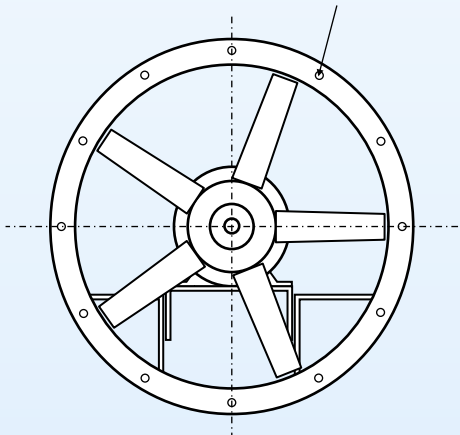


## Model RDD

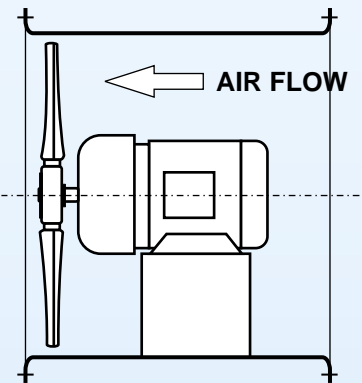
- Housing construction of Heavy Gauge Steel
- 12" through 40" Airfoil Cast Aluminum Propeller Blade
- Ranging from 800 to 44,000 CFM
- Static Pressure 0 to 3" SP.
- Motor sizes are 1/4 to 30 HP depending on propeller size and CFM desired
- The RDD is a Direct Drive fan with motor in the airstream



E - Diameter of holes  
F - Number of holes



"B" RUNNING  
(Factory Standard)



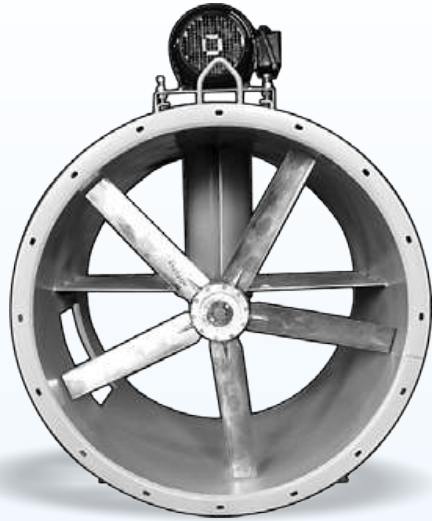
"A" RUNNING  
(Optional - specify when required)

## FAN DIMENSIONS

SIZE	A	B	C	E	F	MOTOR HP			D		
12	12	13 13/16	15	7/16	12	1	—	—	21	—	—
15	15	17	18	7/16	8	2	—	—	21	—	—
18	18	19 3/4	21	7/16	8	3	—	—	21	—	—
21	21	22 3/4	24	7/16	12	<= 5	—	—	24	—	—
24	24	25 3/4	27	7/16	12	<= 5	7.5-10	—	24	27	—
30	30	32 3/8	34	7/16	16	<= 5	7.5-10	—	27	30	—
36	36	38 3/8	40	7/16	16	<= 10	15-20	25-30	30	33	36
40	40	42 3/8	44	7/16	24	<= 10	15-20	25-30	33	33	36

All dimensions are in inches.

# BELT DRIVEN TUBEAXIAL FANS

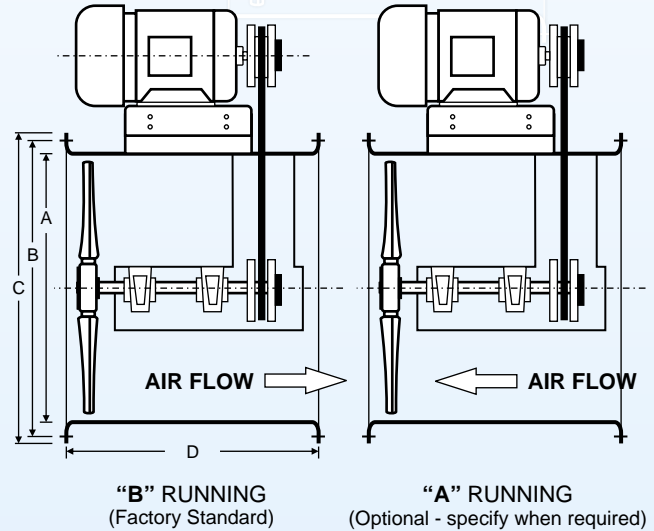
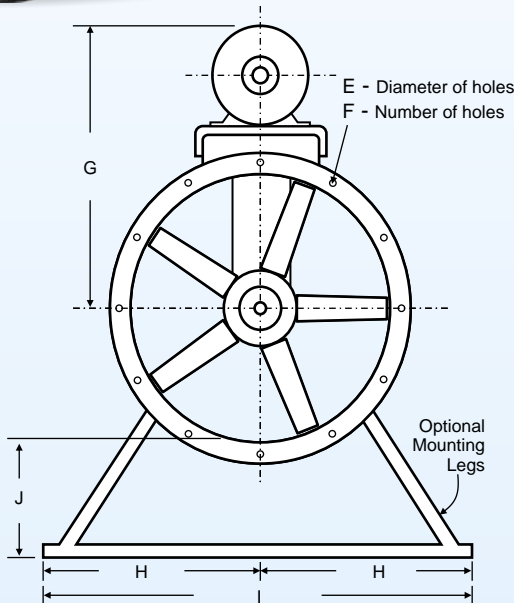


## Model RBD

- Housing construction of Heavy Gauge Steel
- 12” through 48” Airfoil Cast Aluminum Propeller Blade
- Ranging from 1300 to 70,000 CFM
- Static Pressure 0 to 3” SP.
- Motor sizes are 1/4 to 50 HP depending on propeller size and CFM desired
- The RBD is a belt drive fan with motor and drives out of the airstream



Reversomatic Manufacturing Limited certifies that Models RBD-12 to RBD-48 inclusive shown on pages 7, 8 & 9 are licensed to bear the AMCA Seal. The ratings 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.



## FAN DIMENSIONS

SIZE	A	B	C	E	F	G	MOUNTING LEGS		
							H	I	J
12	12	13 13/16	15	7/16	12	17	6	12	7 1/2
15	15	17	18	7/16	8	19	7 1/2	15	8
18	18	19 3/4	21	7/16	8	22	9	18	8 1/2
21	21	22 3/4	24	7/16	12	25	10 1/2	21	9
24	24	25 3/4	27	7/16	12	32	12	24	9 1/2
27	27	29 3/8	31	7/16	16	33	13 1/2	27	10
30	30	32 3/8	34	7/16	16	35	15	30	10 1/2
33	33	35 3/8	37	7/16	16	37	16 1/2	33	11
36	36	38 3/8	40	7/16	16	40	18	36	11 1/2
40	40	42 3/8	44	7/16	24	42	20	40	12 1/2
42	42	44 3/8	46	7/16	24	44	21	42	12 1/2
48	48	50 3/8	52	7/16	24	48	24	48	13 1/2

MOTOR HP			D		
1	—	—	21	—	—
2	—	—	21	—	—
3	—	—	21	—	—
<= 5	—	—	24	—	—
<= 5	7.5 -10	—	24	27	—
<= 5	7.5 -10	—	24	27	—
<= 5	7.5 -10	—	27	30	—
<= 5	7.5 -10	—	27	30	—
<= 10	15 -20	25 -30	30	33	36
<= 10	15 -20	25 -30	33	33	36
<= 20	25 -30	40 -50	33	36	39
<= 20	25 -30	40 -50	33	36	39

\* Custom mounting legs are available upon request

All dimensions are in inches.

# PERFORMANCE DATA OF TUBEAXIAL FANS

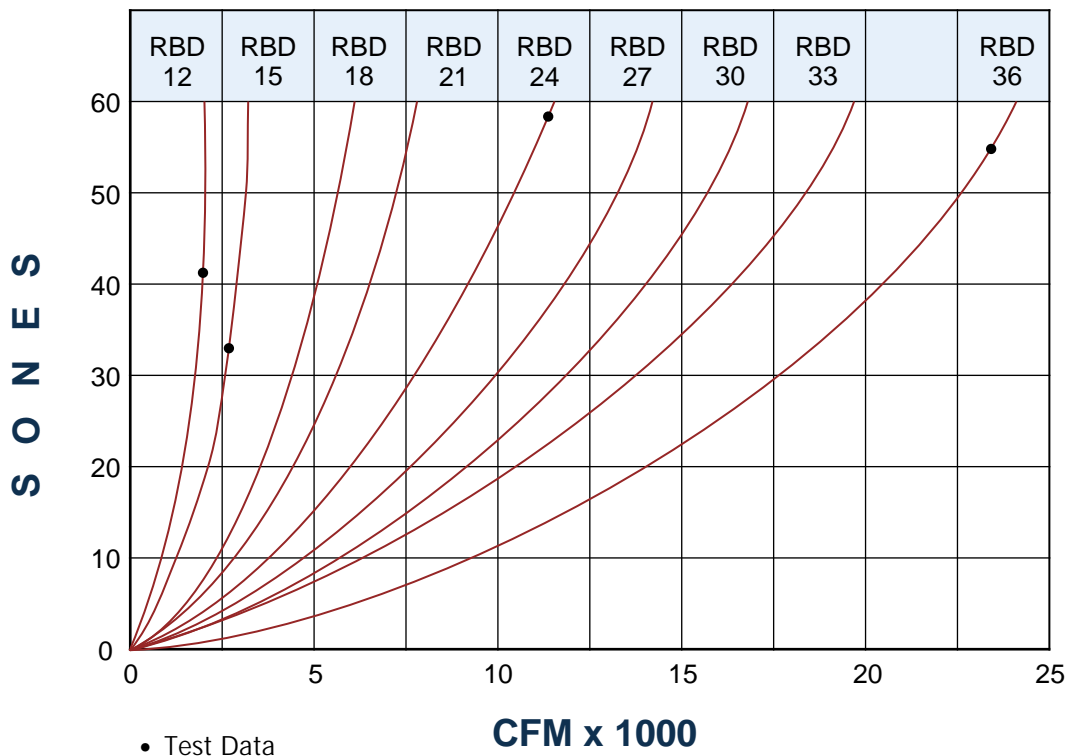
BELT DRIVE 150 mm HUB DIA. 5 BLADES 25° BLADE ANGLE										
MOTOR H.P.	Max. Input Power Watts	FAN RPM	0" SP CFM	1/8" SP CFM	1/4" SP CFM	3/8" SP CFM	1/2" SP CFM	3/4" SP CFM	1" SP CFM	1-1/2" SP CFM
<b>RBD-12"</b>										
0.25 HP	353	2371	1294	1251	1167	1076	986	766		
0.33 HP	471	2601	1429	1382	1303	1224	1142	953	662	
0.50 HP	707	2988	1632	1592	1518	1446	1370	1205	946	
0.75 HP	1059	3420	1870	1820	1760	1690	1620	1460	1200	460
1.00 HP	1413	3765	2057	2006	1949	1879	1812	1657	1384	566
<b>RBD-15"</b>										
0.50 HP	631	1860	2258	2070	1850	1610	1215	250		
0.75 HP	1032	2192	2661	2500	2348	2145	1930	810	353	
1.00 HP	1268	2348	2850	2710	2560	2390	2200	1610	590	
1.50 HP	1894	2685	3260	3200	3000	2876	2760	2364	1190	432
2.00 HP	2528	2955	3587	3390	3280	3190	3080	2790	2300	850
<b>RBD-18"</b>										
0.75 HP	864	1951	3613	3493	3256	3021	2769	2230		
1.00 HP	1153	2148	3978	3857	3641	3421	3197	2699	1995	
1.50 HP	1730	2459	4558	4445	4245	4038	3831	3379	2690	878
2.00 HP	2307	2706	5018	4895	4713	4519	4313	3880	3174	1213
3.00 HP	3460	3097	5741	5599	5439	5251	5059	4632	3875	1600
<b>RBD-21"</b>										
0.75 HP	800	1580	4606	4422	4064	3698	3320	2340		
1.00 HP	1068	1739	5066	4895	4570	4231	3878	3099		
1.50 HP	1602	1991	5797	5642	5348	5044	4726	4045	3065	
2.00 HP	2136	2191	6384	6227	5952	5665	5371	4729	3763	1199
3.00 HP	3204	2508	7305	7125	6896	6619	6350	5736	4721	1854
<b>RBD-24"</b>										
1.00 HP	987	1478	7996	7636	7124	6624	5997	4505		
1.50 HP	1480	1691	9150	8839	8391	7977	7458	6424	4924	
2.00 HP	1973	1861	10071	9786	9375	9017	8524	7655	6528	
3.00 HP	2960	2132	11479	11227	10915	10603	10187	9459	8524	3742
5.00 HP	4933	2528	13664	13318	13059	12840	12494	11836	11098	5548
<b>RBD-27"</b>										
1.00 HP	931	1365	9738	9096	8264	7495	6516	5148		
1.50 HP	1396	1561	11170	10585	9848	9193	8424	6648		
2.00 HP	1861	1718	12285	11799	11071	10491	9788	8409	7171	
3.00 HP	2792	1969	14047	13654	12962	12451	11821	10743	9345	4409
5.00 HP	4654	2334	16650	16278	15690	15272	14704	13745	12590	5940

**NOTE:** Performance certified is for installation type A; Free Inlet, Free Outlet. Performance ratings do not include the effects of appurtenances (accessories). Power (BHP) includes transmission losses. The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft.) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for: Installation A: Free inlet hemispherical sone levels.

BELT DRIVE			150 mm HUB DIA. 5 BLADES 25° BLADE ANGLE									
MOTOR HP	Max. Input Power Watts	FAN RPM	0" SP CFM	1/8" SP CFM	1/4" SP CFM	3/8" SP CFM	1/2" SP CFM	3/4" SP CFM	1" SP CFM	1-1/2" SP CFM	2" SP CFM	2-1/2" SP CFM
<b>RBD-30"</b>												
1.00 HP	883	1148	11479	10556	9404	8366	7035					
1.50 HP	1324	1313	13191	12332	11305	10408	9389	6872				
2.00 HP	1765	1445	14500	13812	12767	11965	11052	9163				
3.00 HP	2648	1655	16614	16081	15008	14299	13455	12027	10165			
5.00 HP	4412	1963	19635	19238	18322	17704	16914	15654	14082	6333		
7.50 HP	6619	2247	22455	22000	21440	20817	19990	18803	17440	8583		
<b>RBD-33"</b>												
1.00 HP	841	990	13221	12016	10545	8467	7554					
1.50 HP	1262	1133	15211	14078	12762	10969	10355	7096				
2.00 HP	1682	1246	16714	15825	14462	12859	12316	9917				
3.00 HP	2523	1428	19182	18508	17055	15637	15088	13310	10986			
5.00 HP	4205	1693	22621	22198	20953	19718	19124	17562	15574	6725		
7.50 HP	6308	1938	25870	25385	24519	23185	22602	21095	19288	9114		
<b>RBD-36"</b>												
2.00 HP	1760	1045	17769	16390	15240	13964	12311	8783				
3.00 HP	2640	1196	20278	19219	18073	16873	15531	13292	6733			
5.00 HP	4400	1418	24093	23316	22176	21140	19793	18135	11399			
7.50 HP	6600	1627	27506	26731	26731	24922	23581	22122	14465			
10.0 HP	8800	1787	30317	29462	29462	27928	26517	25256	16798			

**NOTE:** Performance certified is for installation type A; Free Inlet, Free Outlet. Performance ratings do not include the effects of appurtenances (accessories). Power (BHP) includes transmission losses. The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft.) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for: Installation A: Free inlet hemispherical sone levels.

### SONES AT 0.00" STATIC PRESSURE

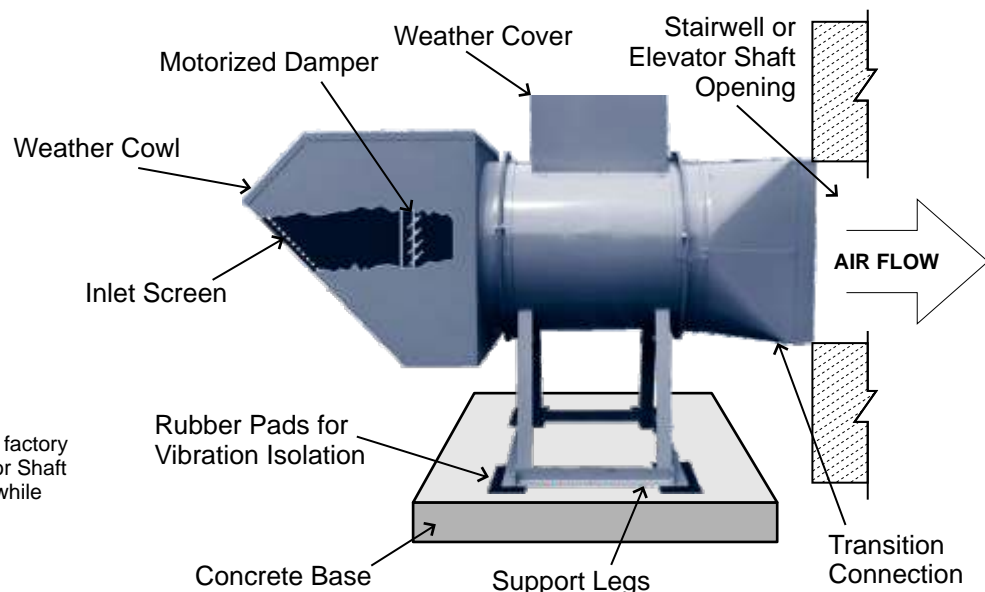


BELT DRIVE											
MOTOR HP	FAN RPM	0" SP CFM	1/8" SP CFM	1/4" SP CFM	3/8" SP CFM	1/2" SP CFM	3/4" SP CFM	1" SP CFM	1-1/2" SP CFM	2" SP CFM	2-1/2" SP CFM
<b>RBD-40"</b>		250 mm HUB DIA. 7 BLADES 25° BLADE ANGLE									
2.00 HP	949	20100	19600	18200	16600	14700					
3.00 HP	1086	23100	22600	21700	20300	18900	15400				
5.00 HP	1288	27300	27300	26500	25500	24400	21900	19000			
7.50 HP	1475	31300	31300	30800	30000	29100	27200	25000	19400		
10.0 HP	1623	34500	34500	34200	33500	32800	31100	29200	24800	18300	
<b>RBD-42"</b>		250 mm HUB DIA. 7 BLADES 25° BLADE ANGLE									
2.00 HP	848	19800	19080	17370	15300	12780					
3.00 HP	972	22680	22230	20790	19170	17370	11790				
5.00 HP	1153	26910	26730	25650	24480	23040	19890	15570			
7.50 HP	1319	30780	30780	29970	28980	27900	25380	22590			
10.0 HP	1454	33930	33930	33390	32490	31590	29430	27090			
15.0 HP	1662	38790	38790	38610	37980	37170	35460	33570	29250		
20.0 HP	1832	42750	42750	42660	42120	41490	40050	38430	34830	30600	25110
25.0 HP	1974	46080	46080	45990	45630	45090	43830	42390	39150	35640	31410
<b>RBD-48"</b>		380 mm HUB DIA. 14 BLADES 25° BLADE ANGLE									
2.00 HP	771	22000	21200	19300	17000	14200					
3.00 HP	884	25200	24700	23100	21300	19300	13100				
5.00 HP	1048	29900	29700	28500	27200	25600	22100	17300			
7.50 HP	1199	34200	34200	33300	32200	31000	28200	25100			
10.0 HP	1322	37700	37700	37100	36100	35100	32700	30100			
15.0 HP	1513	43100	43100	42900	42200	41300	39400	37300	32500		
20.0 HP	1665	47500	47500	47400	46800	46100	44500	42700	38700	34000	27900
25.0 HP	1794	51200	51200	51100	50700	50100	48700	47100	43500	39600	34900

**NOTE:** Heavy duty blades are available for 20 to 50 HP & 40,000 to 70,000 CFM fans depend on operating conditions. Contact factory for selection & more information.

## STAIR / ELEVATOR PRESSURIZATION

### Roof Mounted Assembly Model RBD - Belt Drive



**NOTE:** Height of Support Legs is factory supplied to suit Stairwell or Shaft Opening. Please specify while ordering.

# RBD TYPICAL SPECIFICATION

All belt-drive tube axial fans supply and/or exhaust are model RBD as manufactured by Reversomatic. Propeller construction consists of extruded aluminum propeller blades mounted in cast aluminum hub. The blade pitch is pre-set at the factory to match design conditions and locked into place by means of a self-locking pin. All propellers are statically and dynamically balanced for vibration-free operation. All fans have a heavy gauge steel housing and power assembly. All bearings are grease

lubricated ball bearing pillow block type with a minimum average life of 100,000 hours. All units have external grease fittings for ease in lubricating. Oil resistant nonstatic belts are provided. All fans bear the AMCA seal for sound and air performance. All steel sheet metal parts are cleaned, conditioned and painted with enamel paint finish prior to assembly. A final coat of gray enamel is applied to all exterior surfaces after assembly.

## INSTALLATION

Reversomatic RDD and RBD duct fans may be mounted in any position using several different methods, mounting brackets for ceiling suspension and support legs for floor mounting. Angle supports for rod hangers. For convenience in wiring & service, the motor should be readily accessible. On direct drive units, access through adjacent duct work is recommended. On belt drive units, the motor position must

be considered with regard to service and adjacent objects such as wall and ceiling. Access door is provided. The duct fan has flanged ends on the steel housing for convenience mounting directly in the duct system. Flexible connections or transition pieces may be utilized to reduce noise transmission, simplify duct attachment and provide access to interior of fan.

## MAINTENANCE

Tube axial fans should be cleaned as necessary to remove accumulated dust, dirt and other foreign matter which may collect on the blades or interior surfaces. Belt drive, belt(s) should be inspected and tension adjusted. Check belt(s) for proper alignment. On all belt drive models fan bearings are factory lubricated for extended service.

External relubrication fan bearing fittings are standard

with belt drive models. Pillow-block ball bearings should be lubricated annually or more frequently, depending upon conditions and operating cycle. For lubrication of electric motor, see instructions supplied by motor manufacturer. Always check blade clearance and check direction of rotation with arrow on housing before operating.

### WARRANTY

**REVERSOMATIC MANUFACTURING LIMITED WARRANTS IT WILL PROVIDE A REPLACEMENT PART OF ITS FANS FOUND TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF PURCHASE FOR FIRST USER, F.O.B. OUR PLANT.**

**NOTE: THIS WARRANTY DOES NOT APPLY TO LABOR COSTS INVOLVED IN REPLACEMENT OR REINSTALLATION, DIAGNOSTIC SERVICE, CLEANING AND ADJUSTMENT OR TRANSPORTATION. FURTHERMORE WARRANTY IS ONLY APPLICABLE WHEN REVERSOMATIC REPLACEMENT PARTS AND ACCESSORIES ARE USED.**

### APPROXIMATE SHIPPING WEIGHT (LESS MOTOR) LBS

FAN SIZE	RDD	RBD
12	66	79
15	110	121
18	141	150
21	158	198
24	176	238

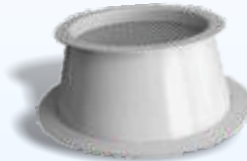
FAN SIZE	RDD	RBD
30	209	286
36	396	418
40	440	484
42		528
48		616

## ACCESSORIES - (Optional)



### WEATHER COVER

Complete enclosure weather covers are available on all RBD fans. The cover provides weather protection for the motor and the drive when the fan is used in outside applications.



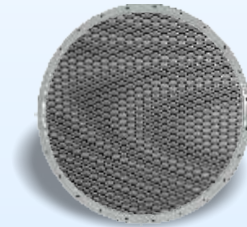
### INLET BELL

Spun aluminum inlet bell available for installation on site



### BELT GUARD

Belt Guard is available for all RBD fans to prevent accidental contact with the drive. Expanded metal is used to cover the front of the guard to allow visual inspection of the drive without removal of the guard.



### SCREEN



### INSPECTION DOOR

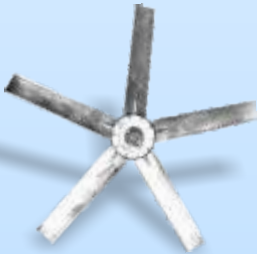
Provides easy access to the bearings.



### SUPPORT FRAME / CEILING BRACKET

**ALSO AVAILABLE:** Floor Mounting Feet, and Disconnect Switch.

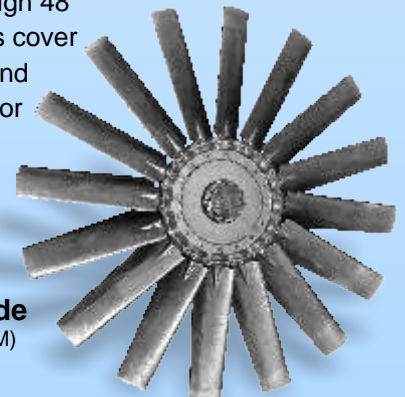
## ALUMINUM DIE CAST PROPELLER



**Standard Duty Blade**  
(800 to 40,000 CFM)

The RBD/RDD aluminum die cast propeller has been designed for use where high static pressure are required. It is constructed of multiple blades 5, 7, 8, 9, 10, 14 & 16 blades. The pitch setting of the blades is done at the factory & the blades are locked into place by means of a self-locking pin. Both units come in a variety of pitches (5° to 45°) to provide a wider performance range. Due to the airfoil blade design the propeller has a non-overloading characteristic such as found in a centrifugal type wheel. The propeller is available in sizes 12" through 48" for belt drive RBD and 12" to 40" for direct drive RDD. Both types cover the range of 0" to 3" static pressure. Each propeller is statically and dynamically balanced for vibration free operation. It is designed for (temperature range) - 40° to 302°F (-40° to 150°C).

**NOTE:** For 20 HP & Up and 1" S.P. & higher, use **heavy duty blades**.



**Heavy Duty Blade**  
(40,000 to 70,000 CFM)



**REVERSOMATIC**  
MANUFACTURING LIMITED

790 Rowntree Dairy Road, Woodbridge ON, Canada L4L 5V3  
Tel: 905-851-6701 • Fax: 905-851-8376 • info@reversomatic.com

[www.reversomatic.com](http://www.reversomatic.com)