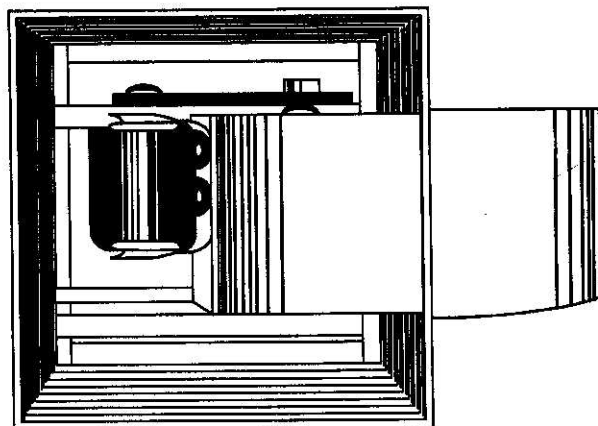
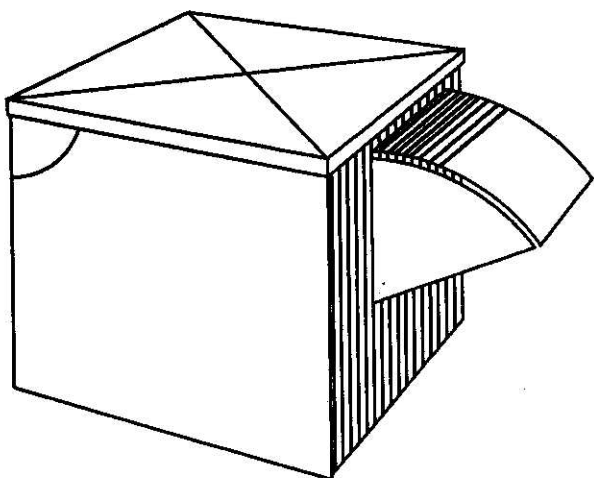


ROOF EXHAUSTERS (ALL CANADIAN)

Designed for high rise apartments, institutional
an most commercial-industrial applications

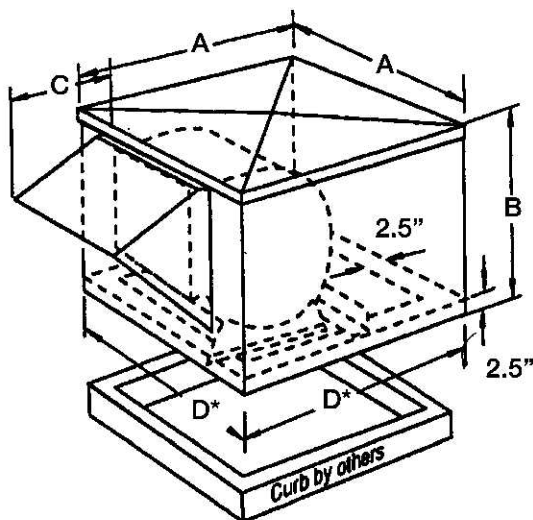
**RE7, RE9, RE10,
RE12, RE15, RE18**



- Equipped with belt driven centrifugall blowers
- Blowers equipped with resilient mount and with ball bearings
- Galvanized construction, paint finish optional
- Back-draft damper and bird screen included
- Recessed bottom for easy installation to curb

- Insulated cabinet
- Top cover easily opens to allow access for servicing
- Unit uses standard shell motors
- Not recommended for exhausting air that contains inflammable substances or grease

A PRACTICAL FAN THAT EXHAUSTS AIR EFFICIENTLY AVAILABLE IN SIX BLOWER SIZES



DIMENSION DATA IN INCHES

Model	A	B	C	D*
RE7	20.38	16.62	9.00	20.00
RE9	24.38	19.38	10.62	24.00
RE10	28.38	21.38	11.38	28.00
RE12	32.28	24.62	13.12	32.00
RE15	36.38	28.38	14.88	36.00
RE18	40.38	33.75	17.38	40.00

*Curb size to be smaller than inside size to allow for flasing and roofing

Reversomatic Manufacturing Ltd.

790 ROWNTREE DAIRY ROAD • WOODBRIDGE, ONTARIO, CANADA L4L 5V3 • PHONE (905) 851-6701 • FAX (905) 851-8376

www.reversomatic.com • EMAIL info@reversomatic.com

ROOF EXHAUSTERS

PERFORMANCE DATA

CAPACITY MODEL	CFM	OUTLET Vel. FPM	1/8" SP		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		1" SP	
			RPM	HPA	RPM	HPA	RPM	HPA	RPM	HPA	RPM	HPA	RPM	HPA	RPM	HPA
RE7	100	129	429	.017	597	.045	728	.080	837	.122	930	.166	1023	.220	-	-
Tip Speed	200	259	452	.022	620	.053	749	.092	861	.137	957	.186	1042	.239	-	-
FPM	300	389	487	.030	645	.064	771	.106	879	.153	977	.207	1063	.284	-	-
RPM x 2.49	400	518	536	.043	679	.080	799	.125	904	.176	999	.232	1086	.293	-	-
Max 1/3 HP	500	648	593	.061	724	.102	836	.151	937	.205	1027	.263	1112	.327	-	-
Std. Drive Range	600	778	656	.085	778	.131	881	.183	976	.241	1063	.304	-	-	-	-
820-1120 RPM																
RE9	200	239	500	.04	647	.07	742	.09	840	.10	927	.12	1040	.12	-	-
Tip Speed	300	358	509	.05	660	.09	750	.10	858	.11	951	.13	1060	.15	-	-
FPM	400	478	545	.07	670	.10	753	.11	869	.12	965	.14	1070	.16	-	-
RPM x 2.49	600	718	626	.11	715	.12	788	.13	880	.15	975	.16	1080	.19	-	-
Max 1/2 HP	800	957	700	.14	778	.16	863	.18	939	.20	1010	.22	1095	.26	-	-
Std. Drive Range	1000	1196	784	.19	865	.20	941	.24	1010	.26	1080	.30	1160	.25	-	-
580 - 790 RPM	1200	1435	892	.25	972	.26	1035	.32	1110	.37	1200	.43	1245	.48	-	-
RE10	600	591	430	.04	556	.08	650	.11	749	.15	828	.17	910	.19	1030	.25
Tip Speed	800	788	487	.07	598	.11	679	.17	760	.19	837	.20	915		1040	.30
FPM	1000	985	568	.12	652	.16	723	.20	796	.22	865	.24	930	.29	1045	.38
RPM x 2.78	1200	1182	638	.19	711	.23	779	.24	845	.29	907	.31	969	.36	1060	.41
Max 3/4 HP	1400	1379	705	.25	778	.27	848	.32	900	.36	959	.40	987	.42	1095	.52
Std. Drive Range	1600	1578	796	.31	850	.37	907	.41	940	.43	985	.47	1042	.53	1140	.63
500 - 690 RPM	1800	1773	863	.44	926	.50	950	.52	1005	.55	1055	.61	1107	.68	1192	.79
	2000	1970	960	.62	980	.60	1035	.68	1075	.72	1125	.77	-	-	-	-
RE12	1000	694	350	.06	449	.10	545	.14	619	.22	694	.23	754	.25	880	.36
Tip Speed	1200	833	381	.08	475	.13	558	.18	621	.24	696	.26	758	.31	882	.41
FPM	1400	972	418	.12	504	.16	572	.21	637	.27	700	.30	759	.35	882	.47
RPM x 3.31	1600	1111	452	.19	535	.22	600	.27	655	.32	718	.35	768	.40	882	.52
Max 3/4 HP	1800	1250	494	.21	565	.28	628	.34	679	.41	737	.43	781	.46	885	.58
Std. Drive Range	2000	1389	532	.28	600	.33	659	.38	708	.44	760	.48	805	.54	895	.64
450 - 610 RPM	2200	1528	571	.36	638	.44	690	.47	741	.54	789	.58	823	.63	912	.73
	2400	1667	618	.46	670	.53	723	.57	768	.64	812	.67	844	.73	-	-
RE15	2200	1095	382	.22	444	.29	495	.36	545	.44	591	.48	638	.56	736	.68
Tip Speed	2600	1294	429	.32	482	.40	528	.48	572	.53	611	.61	648	.58	742	.81
FPM	3000	1493	473	.46	519	.55	559	.60	600	.78	640	.78	690	.85	761	1.01
RPM x 3.92	3400	1692	515	.60	560	.69	600	.80	640	.91	686	.98	716	1.05	784	1.25
Max 3 HP	3800	1891	572	.83	604	.93	638	1.02	681	1.10	719	1.21	750	1.26	810	1.52
Std. Drive Range	4200	2090	610	1.06	643	1.15	690	1.30	721	1.41	753	1.48	787	1.66	845	1.86
480 - 550 RPM	4600	2288	665	1.39	700	1.51	730	1.60	762	1.72	800	1.86	825	1.54	885	2.25
	5000	2488	710	1.80	753	1.97	776	1.98	807	2.07	840	2.24	870	2.36	920	2.62
	5400	2687	760	2.20	807	2.36	828	2.45	848	2.50	880	2.65	905	2.77	-	-
	5600	2787	785	2.40	837	2.60	850	2.64	874	2.76	901	2.90	-	-	-	-
RE18	4000	1396	400	.56	454	.69	492	.80	530	.92	572	1.01	605	1.14	670	1.32
Tip Speed	4400	1526	434	.74	482	.84	518	.97	555	1.06	591	1.22	622	1.32	688	1.59
FPM	4800	1675	480	.94	510	1.05	542	1.17	572	1.31	615	1.50	645	1.58	702	1.82
RPM x 4.75	5200	1815	505	1.19	538	1.27	570	1.41	600	1.60	640	1.76	675	1.95	724	2.11
Max 5 HP	5600	1955	530	1.40	561	1.56	594	1.72	626	1.86	670	2.05	700	2.35	742	2.50
	6000	2094	564	1.77	592	1.90	625	2.08	655	2.28	700	2.40	732	2.62	762	2.80
	6400	2234	595	2.12	618	2.20	652	2.43	690	2.53	730	2.80	753	3.00	782	3.20
	6800	2373	625	2.58	650	2.60	680	2.76	712	3.00	760	3.28	782	3.45	810	3.65
	7200	2513	670	3.00	700	3.05	720	3.21	740	3.45	790	3.75	810	4.10	835	4.05
	7600	2653	708	3.44	732	3.5	748	3.75	770	3.95	820	4.10	845	4.45	860	4.51
	8000	2792	732	3.90	760	3.95	782	4.15	810	4.40	848	4.70	870	4.95	892	5.04

Tested in accordance with AMCA standard 210

H.P. includes belt drive losses

CONTRACTOR		ROOF EXHAUSTERS		
ARCHITECT	JOB	DATE	SUPERSEDES	DRAWING NO.
ENGINEER	DATE SUBMITTED	REVERSOMATIC Manufacturing Ltd. Toronto, Ontario		



REVERSOMATIC
MANUFACTURING LIMITED

INSTALLATION & MAINTENANCE GUIDE

General Instructions

REGULAR MAINTENANCE / LUBRICATION OF THIS UNIT IS REQUIRED TO MAINTAIN THE MANUFACTURER'S WARRANTY.

FOR MOTORS LARGER THAN 7 ½ HP, AN ELECTRONIC "SOFT START" CONTROL IS RECOMMENDED FOR LONGER BELT LIFE.

C A U T I O N

IT IS STRONGLY RECOMMENDED THAT BEFORE STARTING UP THE FAN THE FOLLOWING INSPECTIONS ARE PERFORMED.

- 1. FAN BELT (IF USED) TIGHTNESS AND ALIGNMENT.**
- 2. FAN BLADE CENTERING AND ROTATION.**
- 3. FAN BLADE MOUNTING BOLT TIGHTNESS.**
- 4. MOTOR MOUNTING PLATE BOLT TIGHTNESS.**
- 5. BEARING LUBRICATION.**

WARNINGS AND SAFETY INSTRUCTIONS

1. Do not operate the fan excess of maximum limit.
2. Do not permit any object to enter the fan inlets or outlets; provide a screen covering.
3. Do not operate the fan without adequate guards over rotating parts; provide drive belt, coupling and shaft guards.
4. Provide a disconnect switch with a padlock to prevent fan switch use during maintenance.
5. Locate a disconnect switch at the fan for use of personnel working on the fan.
6. Provide vibration limiting switches to detect sudden changes in the operation of the fan, especially when operating a fan under high temperatures or in an extremely corrosive atmosphere such as fly ash.
7. Lubricate and service bearings regularly. see lubrication schedule.

Reversomatic Manufacturing Ltd.

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

INSTALLATION & MAINTENANCE GUIDE

Performance Problems:

CFM too low - These are some common sources of this problem:

Fan - forward curved impeller installed backwards, fan running backwards, cutoff missing or improperly installed, impeller not centered with inlet collars, fan speed too slow.

System - more resistant to flow than expected, dampers or registers closed, leaks in supply ducts, insulating duct liner loose, clogged filters or coils.

Fan Inlets - leaks around fan inlets, elbows near the inlet, cabinet walls too close. Inlet obstructions cause more restrictive systems but do not cause increased negative pressure readings near the fan inlets. Fan speed may be increased to counteract the effect of restricted fan inlet, but check the maximum RPM for the wheel construction before increasing the speed.

Fan Outlet - most centrifugal fans are used in ducted systems and have been tested with a length of straight duct at the fan outlet, If there is no straight duct at the fan outlet, decreased fan performance will result. If it is not practical to install a straight section of duct at the fan outlet, the fan speed may be increased to overcome this pressure loss. Other sources affecting fan outlet may be sharp elbow nearby, improperly designed turning vanes or other obstructions near the outlet.

Noise - may be caused by:

- Impeller hitting the inlet of the fan or cutoff plate, loose impeller.
- Drives can cause noise if sheaves are not tight on the shaft, belts are too loose or too tight, wrong belt cross section, or mis-matched belts, also worn belts, oily belts or mis-aligned sheaves.
- If couplings are used they may be source of noise by being unbalanced, misaligned, loose or dry of lubricant.
- Bad bearings are a common source of noise when defective, dry of lubricant, loose on the bearing support, loose on the shaft, seals mis-aligned, dirty lubricant, fretting corrosion between inner race and shaft, etc. See separate section on bearing care.
- There can be an electrical source of noise such as AC hum in motor or relay, starting relay chatter, noisy motor bearings, single phasing a 3 phase motor, etc.
- A bent or undersized shaft may be a noise source. **IF MORE THAN TWO BEARINGS ARE ON THE SAME SHAFT, THEY MUST BE CAREFULLY ALIGNED.**
- There may be other noise sources such as obstruction in high velocity air stream causing rattle or pure tone whistle, fan operating at undesirable design point, causing pulsation, cracks or holes in duct work, or whistles in fan housing.

LUBRICATION

RELUBRICATION SCHEDULE (MONTHS)* Ball Bearing Pillow Blocks

SHAFT DIAMETER	Operating Speed (RPM)									
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
5/8" thru 1"	6	6	6	6	4	4	4	4	2	2
1 1/8" thru 1 1/2"	6	6	6	4	4	4	2	2	2	1
1 5/8" thru 1 15/16"	6	6	6	4	4	2	2	1	1	-
2" thru 2 1/2"	6	6	4	4	2	1	1	-	-	-
2 11/16" thru 3 3/16"	6	4	2	2	1	1	1/2	-	-	-

*Suggested initial greasing interval - relubricate while running, if safety permits, until some purging occurs at seals. Adjust lubrication frequency depending on condition of purged grease. Hours of operation, temperature, and surrounding conditions will affect the relubrication frequency required.

- Lubricate with a high quality NLGI No. 2 or No.3 multi purpose ball bearing grease having rust inhibitors and anti-oxidant additives.

Some grease having these properties are:

- Shell - *Alvania EP No.2*
- Mobil - *Mobilux Ep2*
- Texaco - *Molytex No.2*
- Gulf - *Gulfcrown No. 2*
- American - *Amolith No. 2*

- Lubricate bearings prior to extended shutdown or storage and rotate shaft monthly to avoid corrosion.

Spherical Roller Bearings - Solid Pillow Blocks

SHAFT DIAMETER	Operating Speed (RPM)									
	500	1000	1500	2000	2200	2700	3000	3500	4000	4500
3/4" thru 1"	6	6	6	4	4	4	2	2	1	1
1 1/8" thru 1 1/4"	6	6	4	4	2	2	1	1	1	1
1 7/16" thru 1 1/2"	6	4	4	2	2	1	1	1	1	1/2
1 5/8" thru 1 3/4"	6	4	2	2	1	1	1	1	1/2	-
1" 15/16" thru 2"	6	4	2	1	1	1	1	1/2	-	-
2 3/16" thru 2 1/4"	6	4	2	1	1	1	1/2	-	-	-
2 7/16" thru 2 1/2"	4	2	1	1	1	1/2	-	-	-	-
2 11/16" thru 3"	4	2	1	1	1/2	-	-	-	-	-
3 3/16" thru 3 1/2"	4	2	1	1/2	-	-	-	-	-	-

- Lubricate with a multi-purpose roller bearing NLGI grade 2 grease having rust inhibitors, anti-oxidant additives, and a minimum oil viscosity of 500 SSU at 100°F. Some additives.

Some grease having these properties are:

- American - *Rykon No.2*
- Mobil - *Mobilgrease 28*
- Texaco - *Molytex Ep2 grease*

- Lubricate bearings prior to extended shutdown or storage and rotate shaft monthly to avoid corrosion.

RECOMMENDED 'SKF' GREASES FOR 'SKF' BEARINGS

Fixed Pillow Block - LGMT2 Fans running below 80°C (176°F)

Split Pillow Block - LGMT3 Fans running below 80°C (176°F)

Fans Running Above 80°C thru 150°C - LGHT3

TROUBLESHOOTING LIST

IMPELLER

- Loose on shaft
- Unbalance

DRIVE

- Sheave not tight on shaft (motor or fan)
- Belts hitting belt tube or belt guard
- Belts too loose. Adjust for belt stretching after 48 hours of operation.
- Belts too tight
- Belts wrong cross-section
- Belts not "Matched" in length on multi-belt drive
- Variable pitch sheaves not adjusted so each groove has same pitch diameter (multi-belt drive)
- Misaligned sheaves
- Belts worn
- Motor, Motor base or fan not securely anchored
- Belts oily or dirty
- Improper drive selection
- loose key
- Excessive start-stop cycles

COUPLING

- Coupling unbalanced, misaligned, loose or may need lubricant
- Loose key

BEARING

- Defective bearing
- Needs lubrication
- Loose on bearing support
- Loose on shaft
- Seals misaligned
- Foreign material inside bearing
- Worn bearing
- Fretting corrosion between inner race and shaft
- Bearing not sitting on flat surface
- Excessive belt tension

SHAFT

- Bent
- Undersized

MOTOR

- Noisy motor bearings
- Single phasing a three phase motor
- Low voltage

LOOSE FASTENERS

- Impeller set screws
- Bearing set screws
- Drive component set screws
- Fan mounting bolts
- Bearing bolts
- Motor bolts