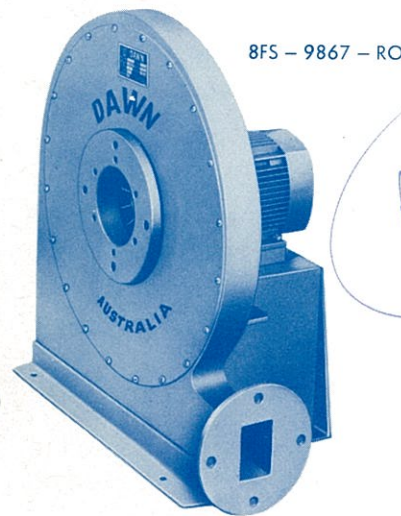


"DAWN" Oil Burner Blowers



FS - SERIES PRESSURE BLOWERS



This range of standard "DAWN" Oil Burner Blowers is specifically designed to suit a number of oil-fired furnace applications where pressure from 3.5 kPa to 7.0 kPa and volumes from 71 L/s to 247 L/s for atomization and combustion of oil fuels.

There are 7 fans in the range with designations and design duties as under:

Designation	Code No.	Volume	Pressure	Motor
3-FS	124337	212 L/s	@ 3.5 kPa	1.5 kW
4-FS	124345	82 L/s	@ 5.25 kPa	1.5 kW
5-FS	124353	165 L/s	@ 5.25 kPa	1.5 kW
6-FS	124361	247 L/s	@ 5.25 kPa	2.25 kW
7-FS	124396	71 L/s	@ 7.0 kPa	1.5 kW
8-FS	124409	141 L/s	@ 7.0 kPa	2.25 kW
9-FS	124417	212 L/s	@ 7.0 kPa	3.0 kW

WEIGHTS:

3-FS	4-FS	5-FS	6-FS	7-FS	8-FS	9-FS
80 kg	85 kg	90 kg	95 kg	100 kg	102 kg	125 kg

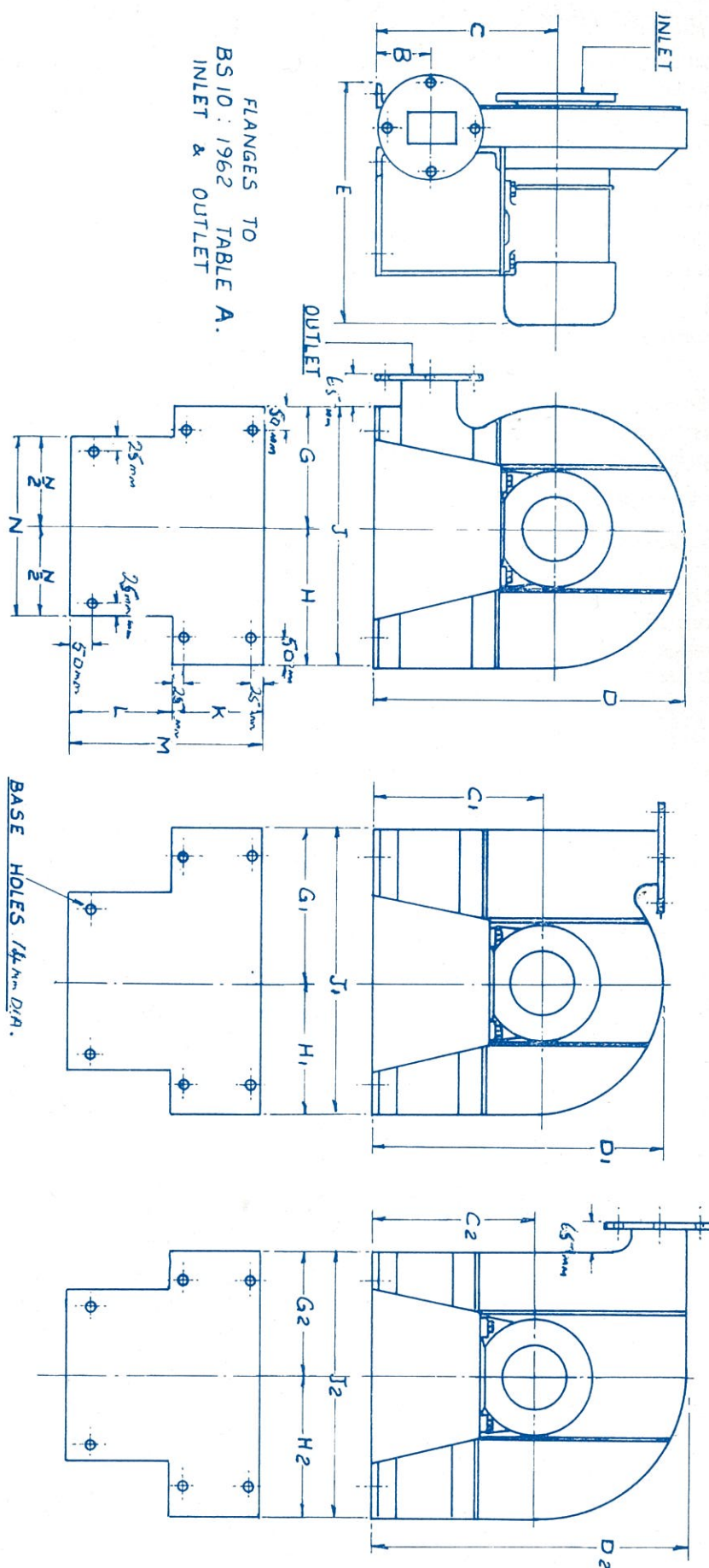
ACCESSORIES:

Air Filters, according to your choice. (Pressure loss through the Filter must be allowed for when selecting Blower.)

Matching Flanges.

Vibration Dampeners or other mountings.

"DAWN" OIL-BURNER BLOWERS



ALL DIMENSIONS IN MM

FAN	B	C	C1	C2	D	D1	D2	E	G	G1	G2	H	H1	H2	J	J1	J2	K	L	M	N
3FS	108	349	329	311	610	572	606	406	243	295	243	278	260	278	521	556	521	168	175	343	330
4FS	79	375	365	356	680	660	680	394	295	324	295	314	305	314	610	629	610	143	200	343	330
5FS	92	387	375	362	699	673	699	394	299	337	299	324	311	324	622	648	616	156	178	343	330
6FS	102	395	379	360	708	670	705	445	292	345	292	327	310	327	619	654	619	165	191	356	356
7FS	79	413	405	397	759	743	759	394	338	362	338	354	346	354	692	708	692	140	203	343	330
8FS	86	429	416	403	781	756	781	445	340	379	340	365	352	365	705	730	705	149	206	356	356
9FS	92	437	422	408	794	765	794	470	343	386	343	372	357	372	714	743	714	159	210	368	356

INLET	OUTLET
125	100
100	50
100	75
125	90
90	50
100	65
125	75

DAWN UNIVERSAL MILL EXHAUST FAN

PERFORMANCE TABLES

CONSTRUCTION:

THE IMPELLER is designed for strength and long life and is constructed completely of steel, accurately machined and balanced. These opened coned paddle type wheels will withstand heavy shocks, and abrasive wear under the severest conditions, continuing to give the user the ultimate in Exhaust Fan life.

THE CASING which is designed to withstand severe abrasive wear is constructed from heavy steel plate. It is also designed in order that the inlet and discharge position is adjustable to any position and direction before or after installation.

THE PEDESTAL is fabricated from heavy steel plate to give ample and rigorous support to the case and bearings.

SHAFT This is of a large size to give a high safety margin in strength and rigidity to compensate overhung impeller and drive pulley.

BEARINGS Standard self aligning bearings of the Pillow and Plummer Block Type, depending on capacity and size of Fan, give a great overload margin in carrying ability so as to ensure trouble free service.

OPERATION CHARACTERISTICS:

These Fans operate in conjunction with a duct system of varying lengths and diameters depending on the actual number of branch ducts and length of air travel, and they may either exhaust materials of merely exhaust or blow air. The system resistance is different in every case and the required air volume is a function of the particular job to be done. Each application means a separate volume-static pressure relationship and hence the fans are required to operate over a speed range to achieve the particular conditions required in each application.

DAWN EXHAUST FANS:

If the capacity your application requires exceeds or precedes the capacity of this range of Fans, may we refer you to the "Dawn" Fabricated Steel Mill Exhaust range with capacities up to 9400 L/s @ 2.5 kPa Static Pressure Resistance or to the "Dawn" Cast Iron Exhaust Universal series "B" range with capacities zero to 564 L/s @ 3 kPa Static Pressure Resistance.

SIZE: No. 9 M.E.U.

INLET DIAMETER: 230 mm

0.25 kPa to 1.0 kPa

DISCHARGE: 190 mm x 190 mm

0.25 kPa			0.5 kPa			0.75 kPa			1.0 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
			212	1248	0.21	260	1530	0.37	292	1764	0.59
191	896	0.09	269	1266	0.25	330	1554	0.45	381	1791	0.70
229	912	0.10	323	1290	0.29	396	1581	0.54	457	1824	0.83
270	933	0.12	381	1320	0.35	466	1620	0.67	540	1868	0.99
320	960	0.15	452	1358	0.42	553	1662	0.78	639	1920	1.20
363	987	0.18	513	1395	0.51	629	1710	0.94	726	1980	1.44
415	1024	0.22	587	1448	0.62	718	1776	1.25	829	2048	1.74
464	1065	0.26	656	1506	0.73	804	1848	1.34	929	2138	2.06
536	1113	0.32	756	1575	0.91	928	1932	1.67	1072	2228	2.57

SIZE: No. 9 M.E.U.

INLET DIAMETER: 230 mm

1.25 kPa to 2.5 kPa

DISCHARGE: 190 mm x 190 mm

1.25 kPa			1.5 kPa			2.0 kPa			2.5 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
337	1980	0.81	369	2160	1.06						
426	2003	0.98	466	2198	1.25	425	2496	1.65			
511	2040	1.16	560	2235	1.53	557	2532	1.95			
603	2090	1.38	660	2288	1.82	647	2580	2.35			
714	2145	1.68	783	2352	2.22	769	2640	2.80	476	2790	2.30
810	2208	2.03	889	2418	2.67	923	2715	3.39	604	2829	2.75
928	2288	2.44	1018	2505	3.21	1026	2790	4.08	722	2888	3.26
1038	2382	2.88	1139	2610	4.5	1173	2895	4.91	852	2955	3.90
1196	2490	3.6	1312	2730	4.73	1313	3012	5.82	1011	3037	4.75

DAWN UNIVERSAL MILL EXHAUST FAN

PERFORMANCE TABLES

SIZE: No. 11 M.E.U.

INLET DIAMETER: 279 mm

0.25 kPa to 1.0 kPa

DISCHARGE: 229 mm x 229 mm

0.25 kPa			0.5 kPa			0.75 kPa			1.0 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
						318	1380	0.47	367	1592	0.72
			328	1144	0.31	402	1402	0.56	463	1620	0.86
			393	1164	0.36	482	1427	0.68	557	1646	1.02
328	842	0.14	463	1190	0.43	568	1458	0.80	655	1684	1.22
389	864	0.19	549	1222	0.53	673	1496	0.98	777	1728	1.50
442	890	0.23	625	1258	0.62	765	1544	1.15	884	1780	1.80
505	922	0.26	714	1304	0.75	875	1596	1.37	1011	1844	2.1
565	960	0.31	799	1358	0.89	978	1665	1.64	1128	1920	2.46
651	1008	0.39	921	1425	1.11	1128	1745	2.05	1303	2016	3.15

SIZE: No. 11 M.E.U.

INLET DIAMETER: 279 mm

1.25 kPa to 2.5 kPa

DISCHARGE: 229 mm x 229 mm

1.25 kPa			1.5 kPa			2.0 kPa			2.5 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
409	1780	1.01	449	1950	1.32	517	2252	2.04	579	2520	2.85
519	1810	1.21	568	1984	1.59	656	2290	2.45	733	2560	3.44
622	1840	1.43	681	2020	1.88	786	2330	2.88	879	2604	4.05
732	1883	1.71	802	2064	2.25	926	2380	3.45	1036	2664	4.86
870	1932	2.09	952	2120	2.76	1099	2445	4.24	1230	2732	6.0
988	1990	2.45	1081	2180	3.23	1249	2516	4.97	1398	2816	6.98
1128	2064	2.94	1237	2260	3.88	1429	2610	6.0	1598	2916	8.36
1263	2150	3.50	1384	2356	4.62	1598	2716	7.13			
1457	2250	4.39	1596	2470	5.79	1841	2850	8.93			

DAWN UNIVERSAL MILL EXHAUST FAN

PERFORMANCE TABLES

SIZE: No. 13 M.E.U.

INLET DIAMETER: 330 mm

0.25 kPa to 1.0 kPa

DISCHARGE: 270 mm x 270 mm

0.25 kPa			0.5 kPa			0.75 kPa			1.0 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
						367	956	0.36	918	1172	0.66
						463	972	0.44	568	1192	0.80
393	700	0.19	556	990	0.52	680	1212	0.95	786	1400	1.46
463	716	0.22	656	1012	0.62	801	1240	1.14	926	1432	1.80
550	735	0.26	777	1038	0.75	952	1274	1.37	1100	1470	2.14
624	757	0.32	882	1070	0.88	1080	1312	1.64	1248	1514	2.52
712	784	0.38	1007	1108	1.07	1232	1358	1.95	1424	1568	3.0
799	816	0.44	1128	1154	1.28	1382	1415	2.33	1598	1632	3.54
919	856	0.56	1297	1210	1.58	1590	1482	2.93	1838	1712	4.50

SIZE: No. 13 M.E.U.

INLET DIAMETER: 330 mm

1.25 kPa to 2.5 kPa

DISCHARGE: 267 mm x 267 mm

1.25 kPa			1.5 kPa			2.0 kPa			2.5 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
580	1514	1.43	635	1656	1.88	733	1912	2.88	819	2140	4.02
733	1538	1.73	804	1682	2.28	926	1944	3.48	1037	2174	4.86
878	1566	2.09	963	1714	2.70	1111	1979	4.14	1241	2212	5.76
1035	1601	2.44	1135	1754	3.24	1309	2025	4.92	1464	2264	6.90
1229	1645	2.94	1347	1801	3.90	1554	2078	6.00	1738	2324	8.40
1394	1694	3.52	1528	1856	4.62	1764	2141	7.02	1970	2394	9.9
1592	1755	4.19	1745	1921	5.52	2014	2217	8.52	2250	2478	11.88
1786	1826	5.01	1955	2000	6.60	2258	2308	10.20	2525	2580	13.98
2054	1916	6.28	2254	2098	8.22	2599	2420	12.56	2905	2705	17.70

DAWN UNIVERSAL MILL EXHAUST FAN

PERFORMANCE TABLES

SIZE: No. 15 M.E.U.

INLET DIAMETER: 380 mm

0.25 kPa to 1.0 kPa

DISCHARGE: 318 mm x 318 mm

0.25 kPa			0.5 kPa			0.75 kPa			1.0 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
			479	832	0.47	587	1020	0.85	658	1176	1.31
429	597	0.20	606	844	0.55	743	1036	1.01	858	1194	1.56
515	608	0.23	728	860	0.66	891	1054	1.21	1029	1216	1.86
607	622	0.28	858	880	0.79	1050	1080	1.50	1215	1245	2.22
719	640	0.34	1018	905	0.95	1245	1108	1.76	1438	1280	2.70
817	658	0.41	1155	930	1.15	1416	1140	2.10	1634	1320	3.24
933	682	0.49	1320	965	1.38	1617	1184	2.54	1867	1365	3.90
1045	710	0.58	1478	1004	1.64	1810	1232	3.00	2091	1425	4.62
1206	742	0.72	1701	1050	2.04	2089	1288	3.75	2411	1485	5.76

SIZE: No. 15 M.E.U.

INLET DIAMETER: 380 mm

1.25 kPa to 2.5 kPa

DISCHARGE: 318 mm x 318 mm

1.25 kPa			1.5 kPa			2.0 kPa			2.5 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
758	1320	1.82	829	1440	2.39	959	1664	3.72	1072	1860	5.16
959	1335	2.18	1051	1465	2.82	1213	1688	4.38	1358	1886	6.18
1152	1360	2.60	1260	1490	3.42	1455	1720	5.28	1626	1925	7.32
1356	1394	3.11	1485	1525	4.08	1725	1760	6.30	1918	1970	8.78
1607	1430	3.78	1762	1568	4.98	2035	1810	7.62	2275	2025	10.69
1824	1472	4.54	2002	1612	6.00	2310	1860	9.19	2585	2080	12.78
2088	1525	5.46	2290	1670	7.20	2641	1930	11.04	2952	2156	15.42
2336	1588	6.47	2563	1740	8.46	2955	2008	13.08	3302	2250	18.24
2693	1660	8.06	2952	1820	10.62	3951	2100	16.32			

DAWN UNIVERSAL MILL EXHAUST FAN

PERFORMANCE TABLES

SIZE: No. 17 M.E.U.

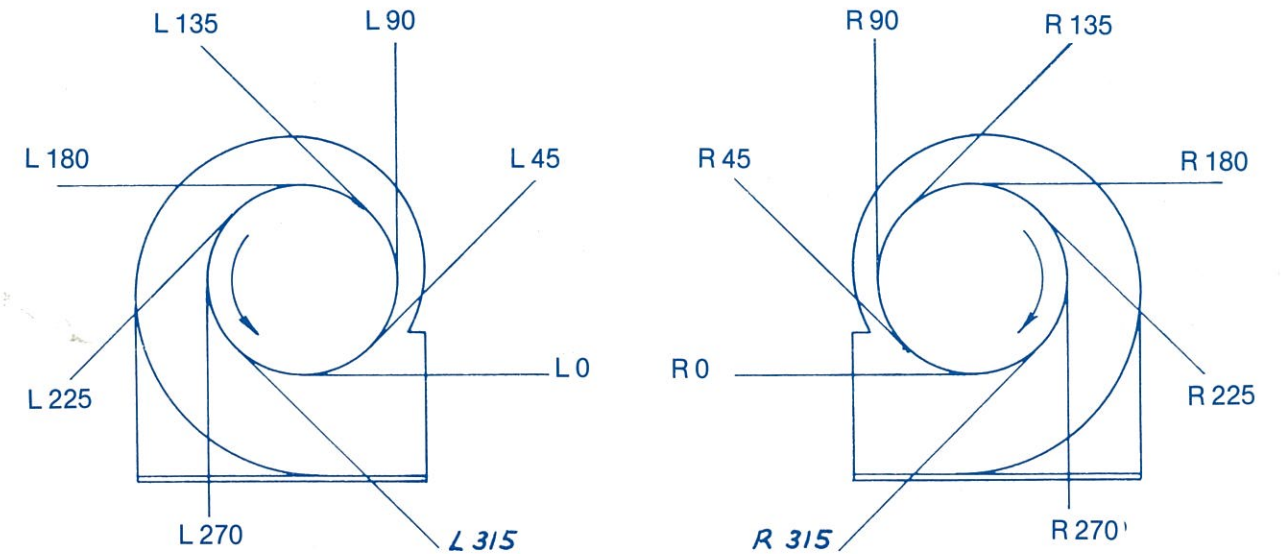
INLET DIAMETER: 430 mm

DISCHARGE: 355 x 355 mm

0.25 kPa			0.5 kPa			0.75 kPa			1.0 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
430	520	0.21	608	735	0.59	745	901	1.10	860	1040	1.68
547	530	0.26	774	749	0.65	948	918	1.33	1094	1060	2.04
651	538	0.30	919	761	0.85	1128	932	1.56	1302	1076	2.40
773	550	0.36	1093	778	1.02	1339	953	1.88	1546	1100	2.88
917	565	0.44	1297	799	1.23	1589	978	2.27	1835	1130	3.48
1039	582	0.52	1469	823	1.46	1799	1008	2.69	2077	1164	4.14
1184	600	0.62	1675	848	1.74	2052	1039	3.20	2369	1200	4.92
1332	628	0.75	1883	888	2.12	2306	1088	3.90	2664	1256	6.00
1535	658	0.92	2170	930	2.61	2658	1140	4.80	3069	1316	7.38
1.25 kPa			1.5 kPa			2.0 kPa			2.5 kPa		
L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW	L/s	r/min	kW
962	1163	2.36	1053	1273	3.09	1216	1470	4.75	1360	1644	6.64
1223	1185	2.86	1340	1298	3.75	1547	1499	5.77	1730	1676	8.06
1456	1203	3.36	1594	1317	4.41	1841	1521	6.79	2058	1701	9.49
1729	1230	4.04	1893	1347	5.30	2186	1555	8.15	2445	1739	11.39
2052	1263	4.88	2247	1384	6.40	2594	1598	9.84	2901	1786	13.76
2322	1301	5.80	2544	1425	7.61	2938	1645	11.71	3284	1840	16.37
2649	1342	6.89	2900	1469	9.04	3349	1696	13.91	3745	1897	19.45
2978	1404	8.40	3262	1538	11.03	3767	1776	16.97	4212	1986	23.72
3431	1471	10.34	3758	1611	13.56	4340	1861	20.87	4852	2080	29.18

DESIGNATION of CASED CENTRIFUGAL FANS

B.S. 848 : PART 1 : 1963



b. COUNTER-CLOCKWISE VIEWED FROM DRIVING SIDE

a. CLOCKWISE

NOTE: Fans Not Designated will be supplied R.O.