



## Performance charts and technical specifications





world leader in energy efficiency



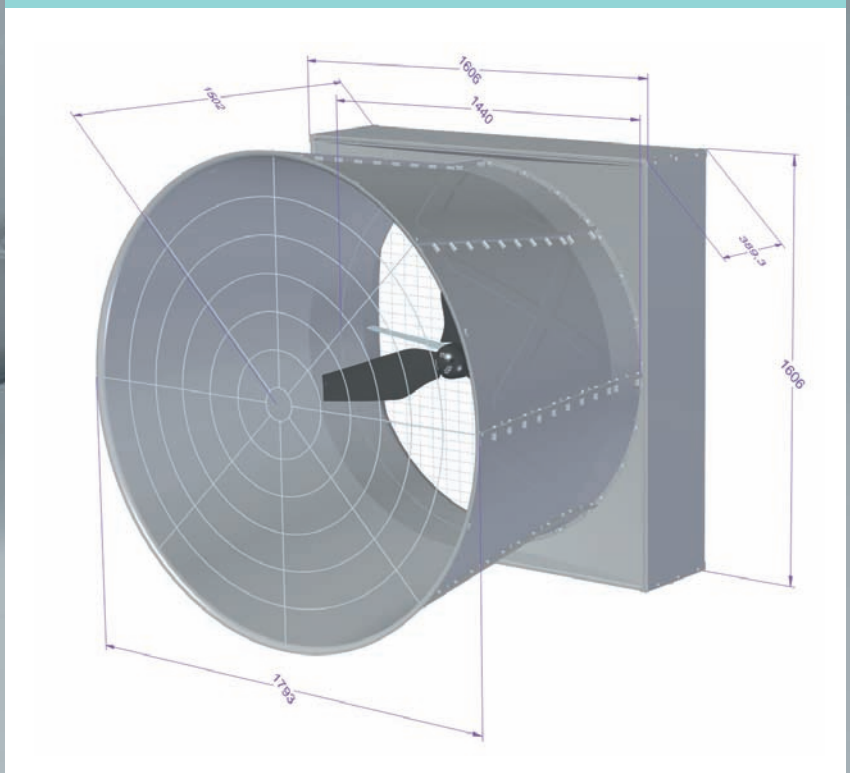
### TECHNICAL SPECIFICATIONS

Housing and cone	PVC, gray (RAL 7040) PP-HD, gray (RAL 7040) UV inhibitors in master batch
Impeller	Celstran Technofiber LGF Akroloy PA-GF50
Brackets, guards:	Stainless steel / AISI 304 / A2
Dimensions assembled	Weight: 90kg / 200lbs L x W x D (mm): See drawing Impeller diameter: 1430mm / 56.5"
Drive	Water proof speed drive IP66 Output max 2.2 kW at 40°C still air Max load in the MagFan application: approximately 75% of full load at 80 Pa and 670 RPM (30°) Max speed set by plug-in, 670-645-630 RPM In-built drive and motor protection
Motor	Permanent Magnet Synchronous 3-phase Output (continuous duty): 1.2kW @ 660RPM Insulation class F, 170°C magnets In-built double Klixon thermal protection Bearings greased for life with antioxidant low temperature grease, special bearing seal Calculated bearing service life: 100,000+ hours
Power supply	Single phase, 100-265VAC, 50/60Hz Three phase, 360-440VAC, 50/60Hz Max single phase input amperage: approximately 7.5 A at 80 Pa and 670 RPM (30°), the equivalent of 75% of full load
Typical RPM range	170-670 RPM. Special low speed inverter programming available upon request
Impeller configuration	3 blade, adjustable pitch 30° 32° 34° 37°
All testing according to ISO5801	Test results obtained using safety netting front and back, and butterfly damper

## IMPELLER COLOUR CODING



## FAN DIMENSIONS





## 30° METRIC

### Volume flow (m<sup>3</sup>/h) as a function of pressure and RPM

Pressure (Pa)	Fan RPM															Pressure (Pa)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0	64727	62426	61247	59646	58307	56744	54042	51739	50159	47545	45592	43653	40870	38636	36095	0
5	63614	61156	59912	58149	56597	55063	52771	50237	48570	45617	43614	41739	38993	35756	33811	5
10	61876	59743	58300	56856	55315	53719	51089	48055	46464	43787	41579	39606	36513	33553	30861	10
15	60689	58294	56831	55158	53630	51830	49472	46451	44391	41663	39574	37357	33932	31079	28173	15
20	59455	56602	55510	53474	51970	50071	47517	44733	42466	39498	37054	35052	31580	28183	25001	20
25	57807	55190	53932	51584	50330	48217	45614	42626	40535	37285	35188	32695	28639	24904	21291	25
30	56124	53590	51941	50190	48615	46630	43976	40613	38424	35247	32385	30119	25465	20935		30
35	55148	52151	50467	48729	46843	45253	41803	38479	36160	32810	30008	26917				35
40	53125	50675	49058	47035	45039	43170	39805	36264	34028	29994	26879					40
45	52051	48954	47187	44719	43364	41236	37824	33988	31342	26771						45
50	50347	47358	45343	43126	41210	39095	35538	31146	27750							50
55	48464	45368	43651	41123	39253	36978	32821	27768								55
60	47144	43796	42005	39403	37181	34612	29857									60
65	45266	41657	39768	36695	34527	31413										65
70	43424	39704	37554	34012	31037	27034										70
75	41381	36954	34550	30368												75
80	39282	34512	31079													80
85	36932	29811														85

#### Example:

Specific consumption =  $530W / 51739m^3/h = 10,24W/1000m^3/h$

### Power consumption (W) as a function of pressure and RPM

Pressure (Pa)	Fan RPM															Pressure (Pa)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0	1005	911	859	785	739	681	604	530	483	421	384	338	285	241	206	0
5	1060	952	898	830	784	726	644	565	516	453	405	367	309	266	229	5
10	1112	1004	946	871	827	766	683	605	555	487	440	397	337	290	253	10
15	1163	1055	995	918	872	803	724	640	592	519	470	427	363	312	271	15
20	1207	1101	1047	965	916	848	763	677	625	551	499	450	383	327	283	20
25	1263	1157	1086	1018	956	894	798	711	657	578	521	471	397	340	290	25
30	1312	1205	1133	1060	1000	931	834	742	682	599	540	485	408	342	270	30
35	1360	1241	1180	1095	1034	965	864	766	703	616	554	497				35
40	1414	1279	1213	1133	1069	994	893	786	719	630	562					40
45	1454	1325	1252	1165	1105	1024	910	803	734	634						45
50	1495	1357	1283	1193	1123	1050	926	816	738							50
55	1532	1389	1309	1219	1149	1064	942	815								55
60	1560	1415	1341	1238	1169	1076	942									60
65	1588	1438	1361	1253	1176	1083										65
70	1611	1465	1379	1263	1175	1044										70
75	1630	1471	1377	1250												75
80	1661	1484	1361													80
85	1660	1440														85







## 30° IMPERIAL

Volume flow (cfm) as a function of pressure and RPM

Pressure ("WC)	Fan RPM															Pressure ("WC)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0.00	38097	36742	36049	35106	34318	33398	31808	30452	29523	27984	26835	25693	24055	22741	21245	0.00
0.02	37442	35995	35263	34225	33312	32409	31060	29568	28587	26849	25670	24567	22950	21045	19901	0.02
0.04	36419	35163	34314	33464	32557	31618	30070	28284	27348	25772	24472	23311	21491	19748	18164	0.04
0.06	35720	34311	33449	32465	31565	30506	29118	27340	26128	24522	23293	21987	19971	18292	16582	0.06
0.08	34994	33315	32672	31473	30588	29470	27967	26329	24995	23248	21809	20631	18587	16588	14715	0.08
0.10	34024	32484	31743	30361	29623	28379	26847	25088	23858	21945	20711	19243	16856	14658	12531	0.10
0.12	33034	31542	30571	29541	28614	27445	25883	23904	22616	20745	19061	17727	14988	12322		0.12
0.14	32459	30695	29704	28681	27571	26635	24604	22648	21283	19311	17662	15843				0.14
0.16	31268	29826	28874	27684	26509	25409	23428	21344	20028	17654	15821					0.16
0.18	30636	28813	27773	26321	25523	24271	22263	20005	18447	15757						0.18
0.20	29633	27874	26688	25383	24255	23011	20917	18332	16333							0.20
0.22	28525	26703	25692	24204	23103	21765	19318	16344								0.22
0.24	27748	25777	24723	23192	21884	20372	17573									0.24
0.26	26642	24518	23406	21598	20322	18489										0.26
0.28	25558	23369	22103	20019	18268	15911										0.28
0.30	24356	21750	20335	17874												0.30
0.32	23120	20313	18292													0.32
0.34	21737	17546														0.34

### Example:

Specific consumption =  $30452\text{cfm} / 530\text{W} = 57.46\text{cfm/W}$

## Power consumption (W) as a function of pressure and RPM

Pressure ("WC)	Fan RPM															Pressure ("WC)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0.00	1005	911	859	785	739	681	604	530	483	421	384	338	285	241	206	0.00
0.02	1060	952	898	830	784	726	644	565	516	453	405	367	309	266	229	0.02
0.04	1112	1004	946	871	827	766	683	605	555	487	440	397	337	290	253	0.04
0.06	1163	1055	995	918	872	803	724	640	592	519	470	427	363	312	271	0.06
0.08	1207	1101	1047	965	916	848	763	677	625	551	499	450	383	327	283	0.08
0.10	1263	1157	1086	1018	956	894	798	711	657	578	521	471	397	340	290	0.10
0.12	1312	1205	1133	1060	1000	931	834	742	682	599	540	485	408	342	270	0.12
0.14	1360	1241	1180	1095	1034	965	864	766	703	616	554	497				0.14
0.16	1414	1279	1213	1133	1069	994	893	786	719	630	562					0.16
0.18	1454	1325	1252	1165	1105	1024	910	803	734	634						0.18
0.20	1495	1357	1283	1193	1123	1050	926	816	738							0.20
0.22	1532	1389	1309	1219	1149	1064	942	815								0.22
0.24	1560	1415	1341	1238	1169	1076	942									0.24
0.26	1588	1438	1361	1253	1176	1083										0.26
0.28	1611	1465	1379	1263	1175	1044										0.28
0.30	1630	1471	1377	1250												0.30
0.32	1661	1484	1361													0.32
0.34	1660	1440														0.34





## 32° METRIC

### Volume flow (m<sup>3</sup>/h) as a function of pressure and RPM

Pressure (Pa)	Fan RPM															Pressure (Pa)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0	70426	67664	65964	63682	62763	60922	58505	55391	53691	51271	49233	47613	44276	41294	38569	0
5	68791	66423	64519	62351	61227	59279	56721	53889	51769	49390	47224	45353	41933	38754	36026	5
10	67155	65181	63075	61020	59691	57636	54938	52387	49847	47509	45215	43093	39591	36214	33483	10
15	65855	63420	61505	59435	58133	55848	53283	50276	47981	45127	42864	40799	37058	33626	30373	15
20	64555	61658	59935	57850	56574	54060	51628	48166	46115	42745	40514	38505	34525	31039	27263	20
25	63131	60130	58299	56081	54752	52423	49809	46334	44145	40809	38336	35976	31596	27457	22524	25
30	61707	58602	56663	54312	52931	50786	47990	44503	42175	38872	36158	33447	28666	23875	17785	30
35	60057	56967	55123	52801	51260	49021	46140	42123	39662	36218	33284	30249				35
40	58407	55332	53582	51290	49588	47256	44290	39742	37148	33564	30409	27052				40

#### Example:

Specific consumption =  $494W / 51271m^3/h = 9,71W/1000m^3/h$

### Power consumption (W) as a function of pressure and RPM

Pressure (Pa)	Fan RPM															Pressure (Pa)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0	1200	1079	1001	921	871	793	711	618	563	494	442	400	331	280	237	0
5	1255	1133	1056	969	918	841	756	661	602	528	478	434	361	308	264	5
10	1311	1186	1111	1018	965	888	801	704	641	563	514	468	391	336	290	10
15	1372	1246	1167	1072	1017	937	847	743	681	600	547	498	415	356	306	15
20	1433	1305	1223	1126	1070	987	892	782	720	637	580	528	440	376	321	20
25	1495	1360	1275	1177	1118	1032	931	815	750	663	602	546	453	384	319	25
30	1557	1415	1328	1228	1167	1076	970	848	779	689	624	565	467	393	316	30
35	1611	1465	1372	1266	1201	1107	1000	873	800	706	637	573				35
40	1665	1514	1416	1305	1236	1138	1030	898	821	723	649	582				40





## 32° IMPERIAL

Volume flow (cfm) as a function of pressure and RPM

Pressure ("WC)	Fan RPM															Pressure ("WC)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0.00	41451	39826	38825	37482	36941	35857	34435	32602	31601	30177	28977	28024	26060	24305	22701	0.00
0.02	40489	39095	37975	36698	36037	34890	33385	31718	30470	29070	27795	26694	24681	22810	21204	0.02
0.04	39526	38364	37124	35915	35133	33923	32335	30834	29339	27963	26612	25364	23302	21315	19707	0.04
0.06	38761	37327	36200	34982	34216	32871	31361	29591	28241	26561	25229	24013	21812	19792	17877	0.06
0.08	37995	36290	35276	34049	33298	31818	30387	28349	27142	25159	23845	22663	20321	18269	16046	0.08
0.10	37157	35391	34314	33008	32226	30855	29317	27271	25983	24019	22564	21175	18597	16160	13257	0.10
0.12	36319	34492	33351	31967	31154	29892	28246	26194	24824	22879	21282	19686	16872	14052	10468	0.12
0.14	35348	33529	32444	31078	30170	28853	27157	24792	23344	21317	19590	17804				0.14
0.16	34377	32567	31537	30188	29187	27814	26068	23391	21864	19755	17898	15922				0.16

### Example:

Specific consumption = 30177cfm / 494W = 61.09cfm/W

Power consumption (W) as a function of pressure and RPM

Pressure ("WC)	Fan RPM															Pressure ("WC)
	670	645	630	612	600	582	558	534	516	492	474	456	426	402	378	
0.00	1200	1079	1001	921	871	793	711	618	563	494	442	400	331	280	237	0.00
0.02	1255	1133	1056	969	918	841	756	661	602	528	478	434	361	308	264	0.02
0.04	1311	1186	1111	1018	965	888	801	704	641	563	514	468	391	336	290	0.04
0.06	1372	1246	1167	1072	1017	937	847	743	681	600	547	498	415	356	306	0.06
0.08	1433	1305	1223	1126	1070	987	892	782	720	637	580	528	440	376	321	0.08
0.10	1495	1360	1275	1177	1118	1032	931	815	750	663	602	546	453	384	319	0.10
0.12	1557	1415	1328	1228	1167	1076	970	848	779	689	624	565	467	393	316	0.12
0.14	1611	1465	1372	1266	1201	1107	1000	873	800	706	637	573				0.14
0.16	1665	1514	1416	1305	1236	1138	1030	898	821	723	649	582				0.16





## Aerodynamics and efficiency

MagFan owes its extreme efficiency not so much to the high efficiency motor and drive, though they do of course count.

Approximately 80% of the efficiency gain comes from the advanced aerodynamics, and the impeller design in particular contributes significantly to the extreme efficiency of MagFan.



Test facilities ISO5801 verified

As a result of the advanced aerodynamics MagFan is about three times as efficient as conventional wall fans on a year average.

The direct drive and the in-built loss free speed control features bring you the exact air exchange required, and the advanced impeller will deliver plenty of thrust and airflow at high RPM and gentle air exchange and phenomenal savings at lower speed settings.



In 2014 DACS won the Danish Award for Sustainable Products with MagFan.



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