

Twin City

REVOLUTIONARY BACKSWEPT AXIAL FAMILY



AZEN MANUFACTURING PTE LTD
A Twin City Fan Company



Revolutionary BackSwept Axial Family

- ✓ Capacities of up to 586,000 m³/hr (345,000 cfm)*
- ✓ Static Pressures of up to 2,100 Pa (8.5 in-wg)*
- ✓ Unlimited Fan Diameters (315mm to 2000mm)
- ✓ 358 Standard Models
- ✓ Direct or Belt Driven
- ✓ Long or Short Cased
- ✓ Custom Design Options Available



At Twin City Azen, we build **fans for every possible ventilation need**. Choose from one of the most **comprehensive** and **widest range of axial products**, designed and manufactured by Twin City Fan Company, one of the oldest and most trusted names in the fan industry.

** Subject to actual operating conditions*



BACKSWEPT IMPELLERS

Exceptional Performance with High Efficiency

All axial fans are fitted with our **Revolutionary, Patent Pending BackSwept Impellers**. Our blade's unique BackSwept profile promises **high airflow** and allows for build up of tip static pressure for **high pressure** applications. The result: fans with lower operating speeds for **ultra quiet operations**.



beyond expectation
axial family

EVERY CORNER ANY PLACE, WE SERVE.



Specialized Cooling



Industrial



Agriculture



Marine



Commercial

Fans for Every Possible
Ventilation Need

application



At **Twin City Azen**, You can be Assured of Receiving:

- Tested, Consistent and Reliable Products
- Creative and Cost Effective Solutions for All Your Air Handling Needs
- First Class Customer Service from a Dedicated Sales & Technical Support Team
- On Time Deliveries to Meet the Tightest Deadlines

CONSTRUCTION

- Constructed of heavy gauge, continuously welded steel casing to prevent air leakage
- Inlet and outlet flanges are rolled mechanically from fan casing sheet to ensure concentricity and alignment
- Pre-punched mounting holes for easy connection to duct work
- Motor base plate fabricated of minimum 4.5mm steel plate and welded to the interior of fan casing to prevent vibration or pulsation

IMPELLERS

- Unique patent pending BackSwept design
- Adjustable pitch angles for exact performance matching
- Choice of either pressure die cast non-sparking aluminum (-70°c to 150°c) or injection molded, UV stabilized, chemically coupled homopolymer polypropylene compound (GRP) (-10°c to 80°c) blades
- Hubs made of pressure die cast aluminum
- Designed to be used with taper-lock bushings for superior holding power on shaft
- All components are natural finish as standard

MOTORS

- Foot mounted, totally enclosed squirrel cage induction motor
- Permanently lubricated, heavy duty, ball bearing type
- Motor shall be closely matched to the fan load and provided at the voltage, phase, hertz and enclosure as requested by client

FINISH & COATING

- Entire fan assembly (excluding shaft and impeller) shall be hot-dipped galvanized
 - Alternatively, application of a rust-preventive primer with a finish coat of paint shall be applied

FACTORY RUN TEST

- All fans shall be completely assembled and subjected to our Factory Acceptance Test prior to shipment
- Impeller shall be statically and dynamically balanced in accordance with ANS/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balanced Quality Grade G6.3
- Balance readings shall be taken by electronic type equipment in the axial, vertical and horizontal directions on each of the bearings

QUALITY ASSURANCE

- All air performance data is based on tests conducted in Twin City's state-of-the-art airflow and acoustics AMCA Certified Laboratory in Minneapolis
- Test procedures are in accordance with AMCA Publication 210-05 and AMCA Publication 300





Direct Driven Axial Fan (Long / Short Cased)



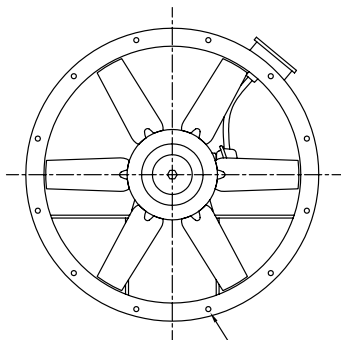
Fan Code Interpretation

Fan Code

315 - 71

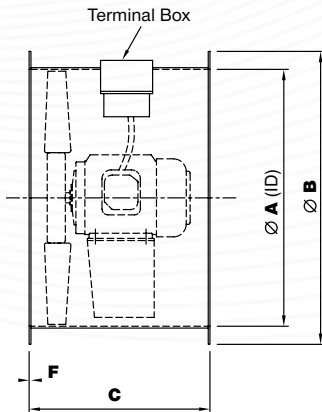
Fan Diameter

Motor Frame Size

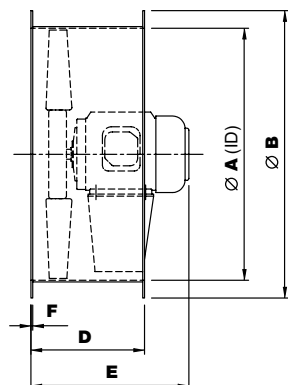


'G' Nos. Of \varnothing 'H' Holes
Equi-Spaced On 'I' PCD
(Both Flanges)

Long Cased Axial Fan



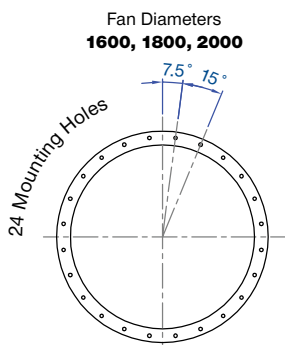
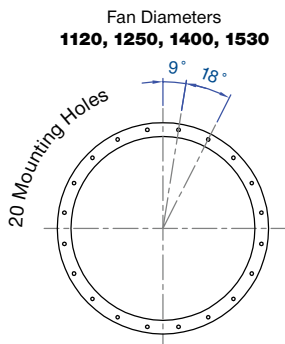
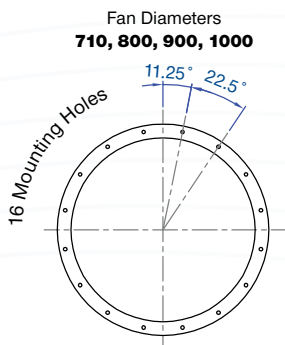
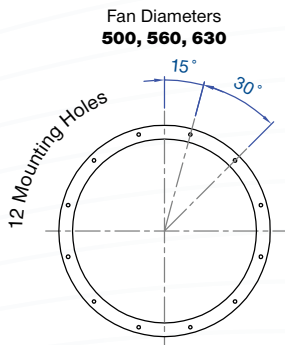
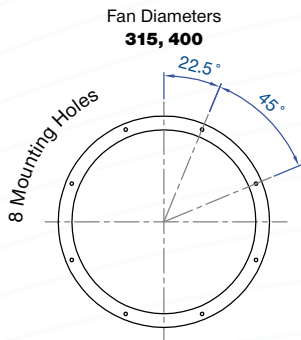
Short Cased Axial Fan



Fan Code	A	B	C	D	E	F	G	H	I	Long Cased Approx. Weight (kg)*	Short Cased Approx. Weight (kg)*
315-71	315	395	300	180	300	3.0	8	10	355	14	12
400-71	400	490	400	220	300	3.0	8	12	450	21	16
400-80	400	490	400	220	335	3.0	8	12	450	21	16
400-90S	400	490	400	220	360	3.0	8	12	450	21	16
400-90L	400	490	400	220	385	3.0	8	12	450	21	16
500-71	500	600	400	220	300	3.0	12	12	560	27	21
500-80	500	600	400	220	335	3.0	12	12	560	27	21
500-90S	500	600	400	220	360	3.0	12	12	560	27	21
500-90L	500	600	400	220	385	3.0	12	12	560	27	21
500-100L	500	600	450	250	430	3.0	12	12	560	31	24
500-112M	500	600	450	250	450	3.0	12	12	560	31	24
560-71	560	660	400	220	300	3.0	12	12	620	30	22
560-80	560	660	400	220	335	3.0	12	12	620	30	23
560-90S	560	660	400	220	360	3.0	12	12	620	30	23
560-90L	560	660	400	220	385	3.0	12	12	620	31	23
560-100L	560	660	450	250	430	3.0	12	12	620	35	26
560-112M	560	660	450	250	450	3.0	12	12	620	35	26
560-132S	560	660	570	400	525	3.0	12	12	620	39	32
560-132M	560	660	570	400	565	3.0	12	12	620	40	33
630-71	630	730	400	250	300	3.0	12	12	690	48	41
630-80	630	730	400	250	335	3.0	12	12	690	48	41
630-90S	630	730	400	250	360	3.0	12	12	690	49	42
630-90L	630	730	400	250	385	3.0	12	12	690	50	43
630-100L	630	730	450	250	430	3.0	12	12	690	53	44
630-112M	630	730	450	250	450	3.0	12	12	690	53	44
630-132S	630	730	570	400	525	3.0	12	12	690	58	50
630-132M	630	730	570	400	565	3.0	12	12	690	60	52
630-160M	630	730	710	400	660	3.0	12	12	690	71	56
710-80	710	810	450	250	335	3.0	16	12	770	54	44
710-90S	710	810	450	250	360	3.0	16	12	770	56	45
710-90L	710	810	450	250	385	3.0	16	12	770	57	46
710-100L	710	810	450	250	430	3.0	16	12	770	58	47
710-112M	710	810	450	250	450	3.0	16	12	770	58	47
710-132S	710	810	570	300	525	3.0	16	12	770	63	49
710-132M	710	810	570	300	565	3.0	16	12	770	65	51
710-160M	710	810	710	400	660	3.0	16	12	770	78	62
710-160L	710	810	710	400	700	3.0	16	12	770	81	65
710-180L	710	810	790	500	760	4.5	16	12	770	110	87
710-200L	710	810	840	550	825	4.5	16	12	770	114	91
800-80	800	900	450	250	335	3.0	16	12	860	59	47
800-90S	800	900	450	250	360	3.0	16	12	860	60	48
800-90L	800	900	450	250	385	3.0	16	12	860	61	49
800-100L	800	900	450	250	430	3.0	16	12	860	62	51
800-112M	800	900	450	250	450	3.0	16	12	860	62	51
800-132S	800	900	570	300	525	3.0	16	12	860	69	53
800-132M	800	900	570	300	565	3.0	16	12	860	71	55
800-160M	800	900	710	400	660	4.5	16	12	860	110	83
900-90S	900	1010	450	250	360	3.0	16	16	970	66	53
900-90L	900	1010	450	250	385	3.0	16	16	970	67	54
900-100L	900	1010	450	250	430	3.0	16	16	970	69	55
900-112M	900	1010	450	250	450	3.0	16	16	970	69	55
900-132S	900	1010	570	300	525	4.5	16	16	970	99	72
900-132M	900	1010	570	300	565	4.5	16	16	970	101	74
900-160M	900	1010	710	450	660	4.5	16	16	970	123	97
900-160L	900	1010	710	450	700	4.5	16	16	970	127	101



FLANGE MOUNTING HOLES



Fan Code	A	B	C	D	E	F	G	H	I	Long Cased Approx. Weight (kg) *	Short Cased Approx. Weight (kg) *
1000-90S	1000	1110	450	300	360	4.5	16	16	1070	142	125
1000-90L	1000	1110	450	300	385	4.5	16	16	1070	143	126
1000-100L	1000	1110	450	300	430	4.5	16	16	1070	143	127
1000-112M	1000	1110	590	300	450	4.5	16	16	1070	160	128
1000-132S	1000	1110	590	300	525	4.5	16	16	1070	162	130
1000-132M	1000	1110	590	300	565	4.5	16	16	1070	165	133
1000-160M	1000	1110	790	420	660	6.0	16	16	1070	232	177
1000-160L	1000	1110	790	420	700	6.0	16	16	1070	235	183
1000-180M	1000	1110	790	500	720	6.0	16	16	1070	238	193
1000-180L	1000	1110	790	500	760	6.0	16	16	1070	239	197
1000-200L	1000	1110	840	550	825	6.0	16	16	1070	248	205
1120-132S	1120	1230	590	300	525	6.0	20	16	1190	203	155
1120-132M	1120	1230	590	300	565	6.0	20	16	1190	206	158
1120-160M	1120	1230	790	420	660	6.0	20	16	1190	253	192
1120-160L	1120	1230	790	420	700	6.0	20	16	1190	260	198
1120-180M	1120	1230	790	500	720	6.0	20	16	1190	261	210
1120-180L	1120	1230	790	500	760	6.0	20	16	1190	262	214
1120-200L	1120	1230	840	550	825	6.0	20	16	1190	272	224
1250-132S	1250	1360	590	300	525	6.0	20	16	1320	219	165
1250-132M	1250	1360	590	300	565	6.0	20	16	1320	223	169
1250-160M	1250	1360	790	420	660	6.0	20	16	1320	275	207
1250-160L	1250	1360	790	420	700	6.0	20	16	1320	282	214
1250-180M	1250	1360	790	500	720	6.0	20	16	1320	285	227
1250-180L	1250	1360	790	500	760	6.0	20	16	1320	286	232
1250-200L	1250	1360	840	550	825	6.0	20	16	1320	298	244
1250-225S	1250	1360	1000	590	870	6.0	20	16	1320	325	249
1250-225M	1250	1360	1000	590	895	6.0	20	16	1320	326	250
1250-250S	1250	1360	1000	590	935	6.0	20	16	1320	341	265
1250-250M	1250	1360	1000	590	980	6.0	20	16	1320	347	271
1400-180M	1400	1510	790	500	720	6.0	20	16	1470	308	248
1400-180L	1400	1510	790	500	760	6.0	20	16	1470	313	253
1400-200L	1400	1510	840	550	825	6.0	20	16	1470	327	267
1400-225S	1400	1510	1000	590	870	6.0	20	16	1470	358	273
1400-225M	1400	1510	1000	590	895	6.0	20	16	1470	360	275
1400-250S	1400	1510	1000	590	935	6.0	20	16	1470	377	292
1400-250M	1400	1510	1000	590	980	6.0	20	16	1470	385	300
1400-280S	1400	1510	1200	690	1070	6.0	20	16	1470	426	320
1400-280M	1400	1510	1200	690	1120	6.0	20	16	1470	436	330
1530-180M	1530	1660	790	500	720	6.0	20	16	1600	336	270
1530-180L	1530	1660	790	500	760	6.0	20	16	1600	342	277
1530-200L	1530	1660	840	550	825	6.0	20	16	1600	357	292
1530-225S	1530	1660	1000	590	870	6.0	20	16	1600	392	299
1530-225M	1530	1660	1000	590	895	6.0	20	16	1600	393	300
1530-250S	1530	1660	1000	590	935	6.0	20	16	1600	414	321
1530-250M	1530	1660	1000	590	980	6.0	20	16	1600	423	330
1530-280S	1530	1660	1200	690	1070	6.0	20	16	1600	468	353
1530-280M	1530	1660	1200	690	1120	6.0	20	16	1600	479	363
1600-180M	1600	1740	790	500	720	6.0	24	20	1680	351	282
1600-180L	1600	1740	790	500	760	6.0	24	20	1680	358	289
1600-200L	1600	1740	840	550	825	6.0	24	20	1680	374	305
1600-225S	1600	1740	1000	590	870	6.0	24	20	1680	410	313
1600-225M	1600	1740	1000	590	895	6.0	24	20	1680	412	314
1600-250S	1600	1740	1000	590	935	6.0	24	20	1680	434	337
1600-250M	1600	1740	1000	590	980	6.0	24	20	1680	443	346
1600-280S	1600	1740	1200	690	1070	6.0	24	20	1680	491	370
1600-280M	1600	1740	1200	690	1120	6.0	24	20	1680	502	381
1800-180M	1800	1940	790	500	720	6.0	24	20	1880	388	310
1800-180L	1800	1940	790	500	760	6.0	24	20	1880	395	318
1800-200L	1800	1940	840	550	825	6.0	24	20	1880	414	337
1800-225S	1800	1940	1000	590	870	6.0	24	20	1880	454	345
1800-225M	1800	1940	1000	590	895	6.0	24	20	1880	457	347
1800-250S	1800	1940	1000	590	935	6.0	24	20	1880	483	374
1800-250M	1800	1940	1000	590	980	6.0	24	20	1880	494	385
1800-280S	1800	1940	1200	690	1070	6.0	24	20	1880	549	413
1800-280M	1800	1940	1200	690	1120	6.0	24	20	1880	562	426
2000-180M	2000	2140	790	500	720	6.0	24	20	2080	424	338
2000-180L	2000	2140	790	500	760	6.0	24	20	2080	433	347
2000-200L	2000	2140	840	550	825	6.0	24	20	2080	454	368
2000-225S	2000	2140	1000	590	870	6.0	24	20	2080	499	378
2000-225M	2000	2140	1000	590	895	6.0	24	20	2080	502	380
2000-250S	2000	2140	1000	590	935	6.0	24	20	2080	532	411
2000-250M	2000	2140	1000	590	980	6.0	24	20	2080	545	424
2000-280S	2000	2140	1200	690	1070	6.0	24	20	2080	607	456
2000-280M	2000	2140	1200	690	1120	6.0	24	20	2080	622	471

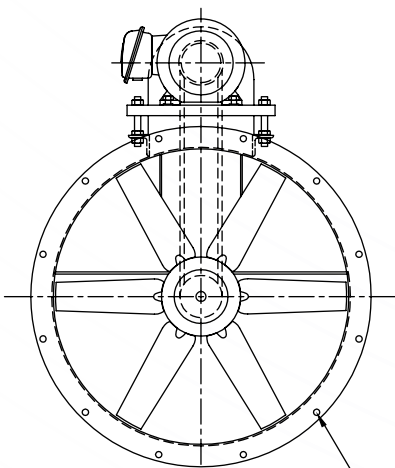
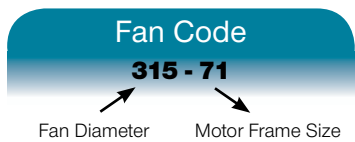
* Excludes weight of motor. Kindly consult factory for exact weights.



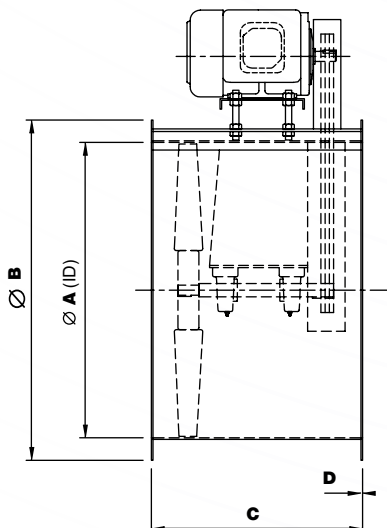
Belt Driven Axial Fan (Long Cased Only)



Fan Code Interpretation



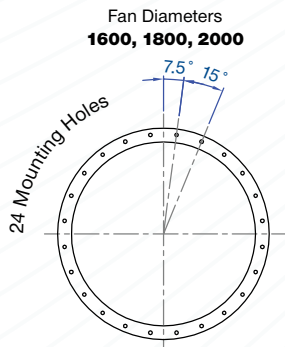
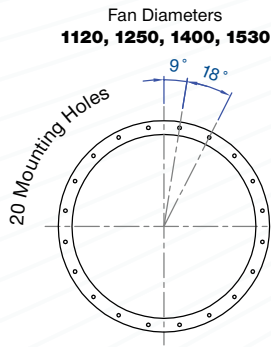
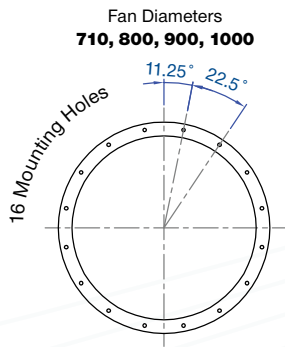
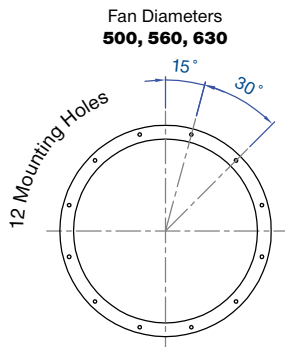
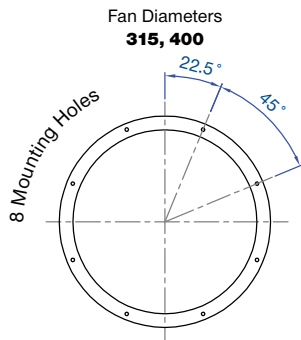
'E' Nos. Of \varnothing 'F' Holes
Equi-Spaced On 'G' PCD
(Both Flanges)



Fan Code	A	B	C	D	E	F	G
315-71	315	395	300	3.0	8	10	355
315-80	315	395	350	3.0	8	10	355
400-71	400	490	400	3.0	8	12	450
400-80	400	490	400	3.0	8	12	450
400-90S	400	490	400	3.0	8	12	450
400-90L	400	490	400	3.0	8	12	450
400-100L	400	490	450	3.0	8	12	450
400-112M	400	490	450	3.0	8	12	450
500-71	500	600	400	3.0	12	12	560
500-80	500	600	400	3.0	12	12	560
500-90S	500	600	400	3.0	12	12	560
500-90L	500	600	400	3.0	12	12	560
500-100L	500	600	450	3.0	12	12	560
500-112M	500	600	450	3.0	12	12	560
560-71	560	660	400	3.0	12	12	620
560-80	560	660	400	3.0	12	12	620
560-90S	560	660	400	3.0	12	12	620
560-90L	560	660	400	3.0	12	12	620
560-100L	560	660	450	3.0	12	12	620
560-112M	560	660	450	3.0	12	12	620
560-132S	560	660	570	3.0	12	12	620
560-132M	560	660	570	3.0	12	12	620
630-71	630	730	400	3.0	12	12	690
630-80	630	730	400	3.0	12	12	690
630-90S	630	730	400	3.0	12	12	690
630-90L	630	730	400	3.0	12	12	690
630-100L	630	730	450	3.0	12	12	690
630-112M	630	730	450	3.0	12	12	690
630-132S	630	730	570	3.0	12	12	690
630-132M	630	730	570	3.0	12	12	690
630-160M	630	730	710	3.0	12	12	690
710-80	710	810	450	3.0	16	12	770
710-90S	710	810	450	3.0	16	12	770
710-90L	710	810	450	3.0	16	12	770
710-100L	710	810	450	3.0	16	12	770
710-112M	710	810	450	3.0	16	12	770
710-132S	710	810	570	3.0	16	12	770
710-132M	710	810	570	3.0	16	12	770
710-160M	710	810	710	3.0	16	12	770
710-160L	710	810	710	3.0	16	12	770
710-180L	710	810	790	4.5	16	12	770
710-200L	710	810	840	4.5	16	12	770
800-80	800	900	450	3.0	16	12	860
800-90S	800	900	450	3.0	16	12	860
800-90L	800	900	450	3.0	16	12	860
800-100L	800	900	450	3.0	16	12	860
800-112M	800	900	450	3.0	16	12	860
800-132S	800	900	570	3.0	16	12	860
800-132M	800	900	570	3.0	16	12	860
800-160M	800	900	710	4.5	16	12	860



FLANGE MOUNTING HOLES



Fan Code	A	B	C	D	E	F	G
900-90S	900	1010	450	3.0	16	16	970
900-90L	900	1010	450	3.0	16	16	970
900-100L	900	1010	450	3.0	16	16	970
900-112M	900	1010	450	3.0	16	16	970
900-132S	900	1010	570	4.5	16	16	970
900-132M	900	1010	570	4.5	16	16	970
900-160M	900	1010	710	4.5	16	16	970
900-160L	900	1010	710	4.5	16	16	970
1000-90S	1000	1110	450	4.5	16	16	1070
1000-90L	1000	1110	450	4.5	16	16	1070
1000-100L	1000	1110	450	4.5	16	16	1070
1000-112M	1000	1110	590	4.5	16	16	1070
1000-132S	1000	1110	590	4.5	16	16	1070
1000-132M	1000	1110	590	4.5	16	16	1070
1000-160M	1000	1110	790	6.0	16	16	1070
1000-160L	1000	1110	790	6.0	16	16	1070
1000-180M	1000	1110	790	6.0	16	16	1070
1000-180L	1000	1110	790	6.0	16	16	1070
1000-200L	1000	1110	840	6.0	16	16	1070
1120-132S	1120	1230	590	6.0	20	16	1190
1120-132M	1120	1230	590	6.0	20	16	1190
1120-160M	1120	1230	790	6.0	20	16	1190
1120-160L	1120	1230	790	6.0	20	16	1190
1120-180M	1120	1230	790	6.0	20	16	1190
1120-180L	1120	1230	790	6.0	20	16	1190
1120-200L	1120	1230	840	6.0	20	16	1190
1250-132S	1250	1360	590	6.0	20	16	1320
1250-132M	1250	1360	590	6.0	20	16	1320
1250-160M	1250	1360	790	6.0	20	16	1320
1250-160L	1250	1360	790	6.0	20	16	1320
1250-180M	1250	1360	790	6.0	20	16	1320
1250-180L	1250	1360	790	6.0	20	16	1320
1250-200L	1250	1360	840	6.0	20	16	1320
1250-225S	1250	1360	1000	6.0	20	16	1320
1250-225M	1250	1360	1000	6.0	20	16	1320
1250-250S	1250	1360	1000	6.0	20	16	1320
1250-250M	1250	1360	1000	6.0	20	16	1320

$$\frac{\text{CFM} \times \text{TP}}{6356 \times \text{BHP}} \times 100$$

$$\frac{\text{CFM} \times \text{SP}}{6356 \times \text{BHP}} \times 100$$

Formulas For Fan Applications

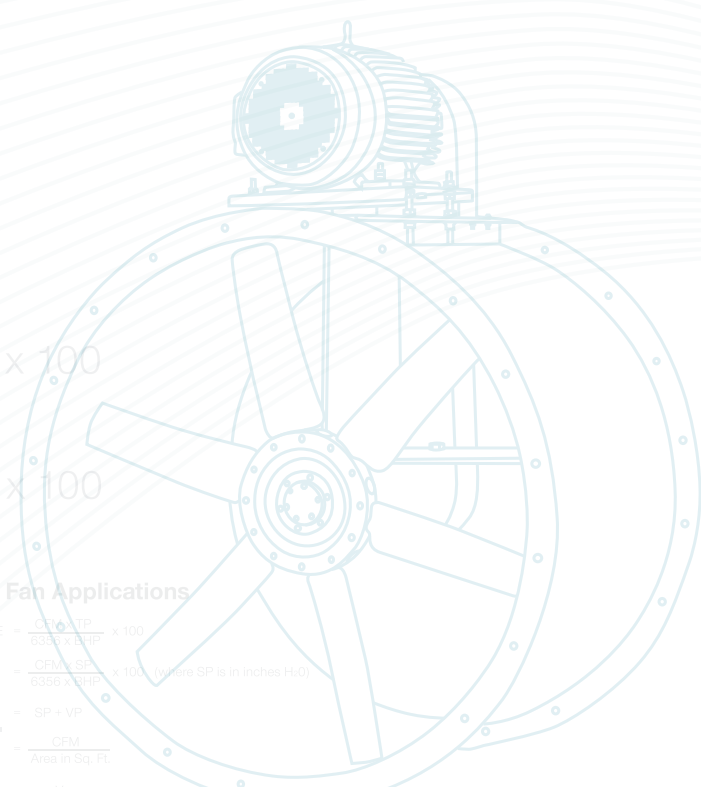
Mechanical Efficiency, ME = $\frac{\text{CFM} \times \text{TP}}{6356 \times \text{BHP}} \times 100$

Static Efficiency, SE = $\frac{\text{CFM} \times \text{SP}}{6356 \times \text{BHP}} \times 100$ (where SP is in inches H₂O)

Total Pressure, TP = $\frac{\text{CFM}}{\text{Area in Sq. Ft.}}$

Velocity Pressure, VP = $\left(\frac{V}{1096.7}\right)^2 \times \text{density in pounds per cubic foot}$

If the density is 0.075 lbs/ft³, the equation for VP reduces to = $\left(\frac{V}{4005}\right)^2$





Multiple Options, One Solution.

For alternative forms of ventilation, customers can choose from the other options under the BackSwept family range. As all fans are incorporated with our high performance BackSwept impellers, you can be assured of superior and reliable ventilation regardless of fan type, every time.



SUPER COMPACT AXIAL FAN WITH STURDY SPIDERLEG® SUPPORTS

A) SpiderLeg® Fans

- Extremely compact and sturdy in design
- Perfect for areas with tight space constraints
- Improves airflow patterns in confined spaces
- Available in customized sizes
- Registered design exclusive to Twin City Azen
- Patent pending



ADAPTABLE & PORTABLE VENTILATION

B) Mancoolers

- Ideal for hazardous, marine and construction applications
- Choice of single or double stage fan with one or multiple outlets
- Specially designed cone to ensure evenness of airflow through each nozzle



VENTILATION FOR HAZARDOUS APPLICATIONS

C) Explosion Proof Fans

- Specially constructed for safe handling of explosive or flammable particles, fumes or vapors
- Non-ferrous wheel and non-ferrous ring shall be provided
- Fitted with explosion proof electric motors to meet exact hazardous location standards



RELIABLE VENTILATION FOR HOSTILE ENVIRONMENTS

D) Bifurcated Fans

- Suitable for kitchen use or hostile environments
- Motor is protected from airstream
- Cylindrical or conical case available
- Air working temperatures of 150 °c - 250 °c



AXIAL POWER ROOF VENTILATORS

E) Roof Ventilators

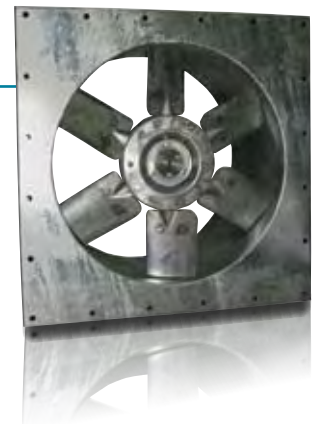
- Upblast: includes a heavy duty galvanized steel stack cap with butterfly dampers to discharge air upward and prevent recirculation into the building
- Mild Steel Cowling: choice of plain mild steel cowl or cowl with adjustable damper for marine & industrial applications
- FRP Cowling: for cost effective non-hazardous industrial or commercial applications



SQUARE PLATE AXIAL UNITS

F) Wall Mount Fans

- Useful for general industrial and commercial ventilation
- Square plates for wall mounting
- Available in either exhaust or supply configurations



any
possibility
we design
possibility any
possibility



Optional Accessories

Acoustic Silencers

- Silencers are designed to reduce fan noise with minimal resistance to airflow.
- Twin City Azen's axial fans and silencers provide an aerodynamically and acoustically matched package.
- Choice of podded or non-podded silencers are available.
- Flange connections on both the inlet and outlet ends provide easy mounting to the axial fan.
- Silencers can be added to both the fan inlet and outlet for the most critical noise applications.

Inlet Cones

- Recommended to minimize losses for installations where inlet of the fan is not attached to a ducted system.
- Inlet and outlet cones offer a round-to-round transition from the fan inlet and/or outlet to the specific duct diameter of the system.

Matching Flanges

- Rolled angle rings that match the fan inlet and outlet flanges to provide easy attachment for slip duct connections.

Flexible Collar with Matching Flanges

- Provides flexible interconnection and isolation of vibration with any matched interface.

Vibration Isolators

- Rubber-in-shear and spring type isolators are available for floor or ceiling mounting.

Protective Screens

- Offered to protect personnel from moving parts.
- Recommended for use when no duct work is attached to the inlet and/ or outlet.
- Screens are removable for routine inspection and cleaning of impeller.

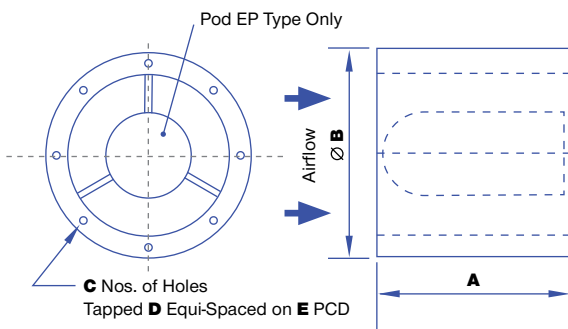
Suspension Clips

- Clips are recommended to permit the easy installation and when using vibration isolators.

Mounting Brackets

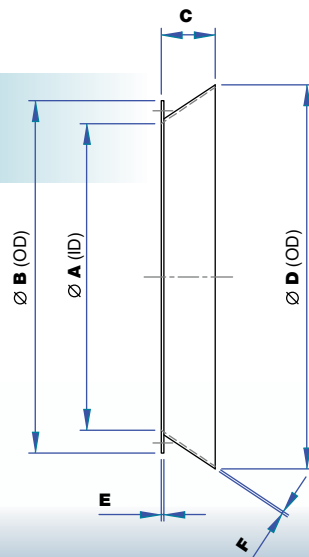
- Available for ceiling hung or floor mount configurations.
- Mounting brackets are bolted to the inlet and outlet flange.

ACOUSTIC SILENCER



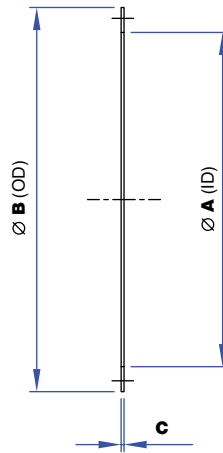
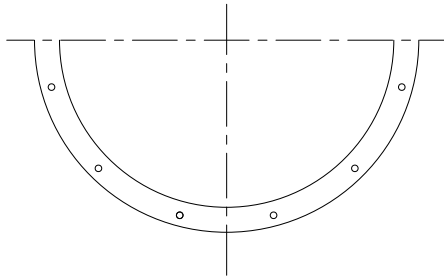
ACOUSTIC SILENCER										
Fan Dia.	A		B	C	D	E	Approx. Weight (kg)			
	1D	2D					Non Podded		Podded	
							1D	2D	1D	2D
315	315	630	415	8	M8	355	7	13	11	17
400	400	800	500	8	M10	450	12	22	16	29
500	500	1000	650	12	M10	560	22	37	29	45
560	560	1120	710	12	M10	620	25	40	32	47
630	630	1260	780	12	M10	690	29	52	36	58
710	710	1420	860	16	M10	770	34	66	46	72
800	800	1600	950	16	M10	860	45	81	59	100
900	900	1800	1100	16	M12	970	79	121	101	158
1000	1000	2000	1200	16	M12	1070	113	161	143	216
1250	1250	2500	1450	20	M12	1320	184	267	214	326

INLET CONE



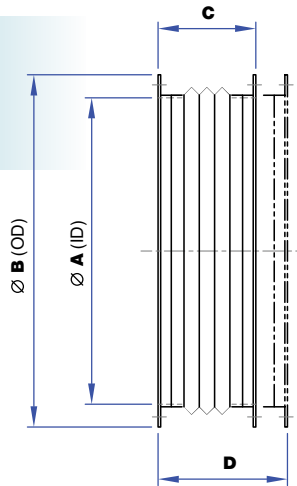
INLET CONE							Approx. Weight (kg)
A	B	C	D	E	F		
315	395	60	400	3.0	3.0	3	
400	490	70	510	3.0	3.0	4.5	
500	600	90	640	4.5	3.0	8	
560	660	100	715	4.5	3.0	9.5	
630	730	110	800	4.5	3.0	11	
710	810	125	890	4.5	3.0	13.5	
800	900	135	995	4.5	3.0	16	
900	1010	150	1110	4.5	3.0	20	
1000	1110	165	1230	6.0	4.5	32	
1120	1230	185	1375	6.0	6.0	51	
1250	1360	205	1525	6.0	6.0	62	
1400	1510	230	1710	6.0	6.0	76	
1530	1660	265	1890	6.0	6.0	97	
1600	1740	265	1960	6.0	6.0	102	
1800	1940	295	2200	6.0	6.0	125	
2000	2140	295	2400	6.0	6.0	138	

MATCHING FLANGE



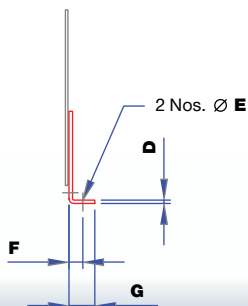
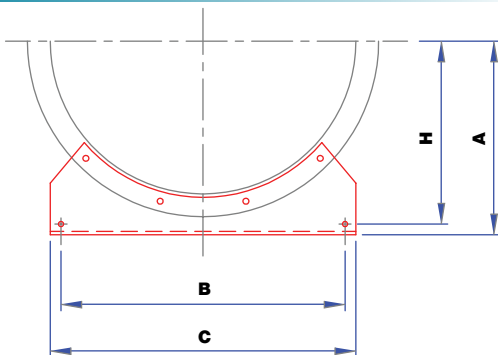
MATCHING FLANGE			
A	B	C	Approx. Weight (kg)
315	395	3.0	2
400	490	3.0	2.5
500	600	3.0	3.5
560	660	3.0	4
630	730	3.0	4.5
710	810	3.0	5
800	900	3.0	6
900	1010	3.0	7
1000	1110	4.5	12
1120	1230	6.0	18
1250	1360	6.0	20
1400	1510	6.0	25
1530	1660	6.0	30
1600	1740	6.0	33
1800	1940	6.0	37
2000	2140	6.0	41

FLEXIBLE COLLAR WITH MATCHING FLANGE



FLEXIBLE COLLAR				
A	B	C	D	Approx. Weight (kg)
315	395	100	150	5
400	490	100	150	6
500	600	100	150	8
560	660	100	150	9
630	730	150	200	10
710	810	150	200	11
800	900	150	200	13
900	1010	150	200	16
1000	1110	150	200	26
1120	1230	150	200	38
1250	1360	150	200	42
1400	1510	150	200	53
1530	1660	150	200	63
1600	1740	150	200	69
1800	1940	150	200	77
2000	2140	150	200	85

MOUNTING BRACKET

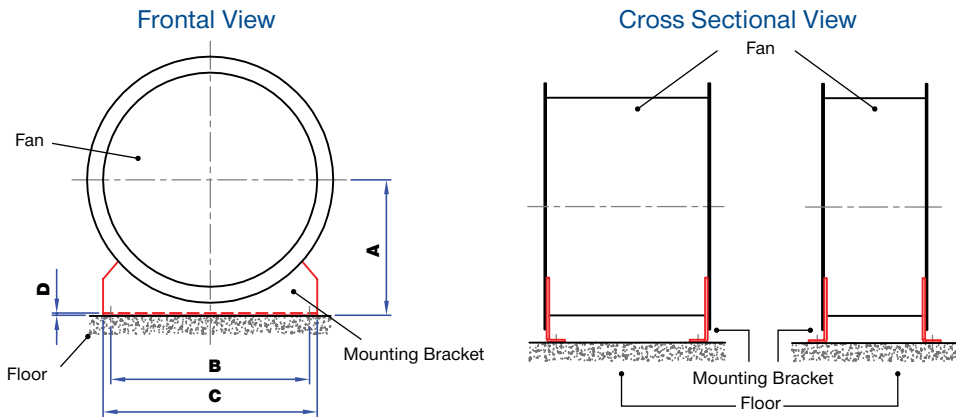


MOUNTING BRACKET									
Fan Dia.	A	B	C	D	E	F	G	H	Approx. Weight (kg)
315	200	265	315	3.0	10	23	40	180	1
400	250	350	400	4.5	12	27.5	50	230	1.5
500	315	450	500	4.5	12	27.5	50	290	2.5
560	355	510	560	4.5	12	32	60	330	4
630	400	580	630	4.5	12	32	60	375	5
710	450	660	710	4.5	12	32	60	425	5.5
800	500	750	800	6.0	12	32	60	475	7.5
900	560	850	900	6.0	16	16	70	530	9
1000	630	950	1000	6.0	16	36	70	595	12
1120	700	1070	1120	6.0	16	36	70	665	15
1250	780	1200	1250	6.0	16	36	70	745	19
1400	840	1300	1400	6.0	16	36	70	805	23
1530	910	1430	1530	8.0	16	40	75	860	33
1600	950	1500	1600	8.0	20	40	75	900	35
1800	1050	1700	1800	8.0	20	40	75	1000	40
2000	1150	1900	2000	8.0	20	40	75	1100	46

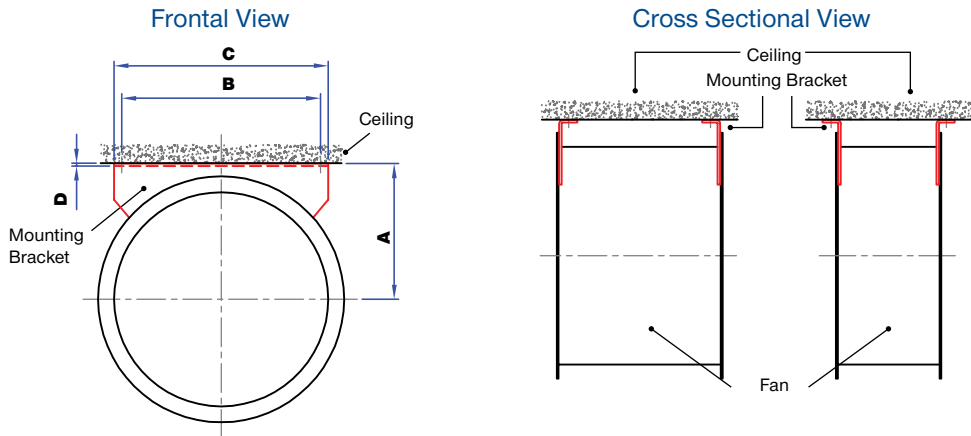


MOUNTING TYPES

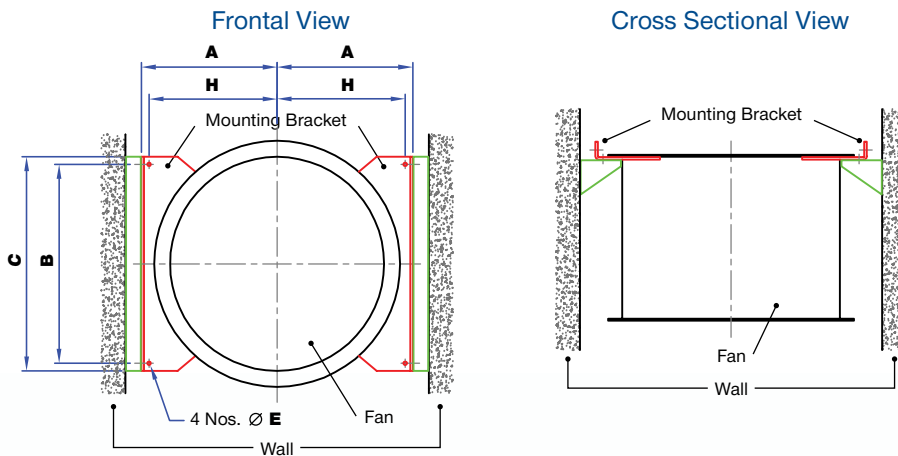
FOOT MOUNTED - HORIZONTAL



CEILING MOUNTED - HORIZONTAL



RIGID MOUNTED - VERTICAL





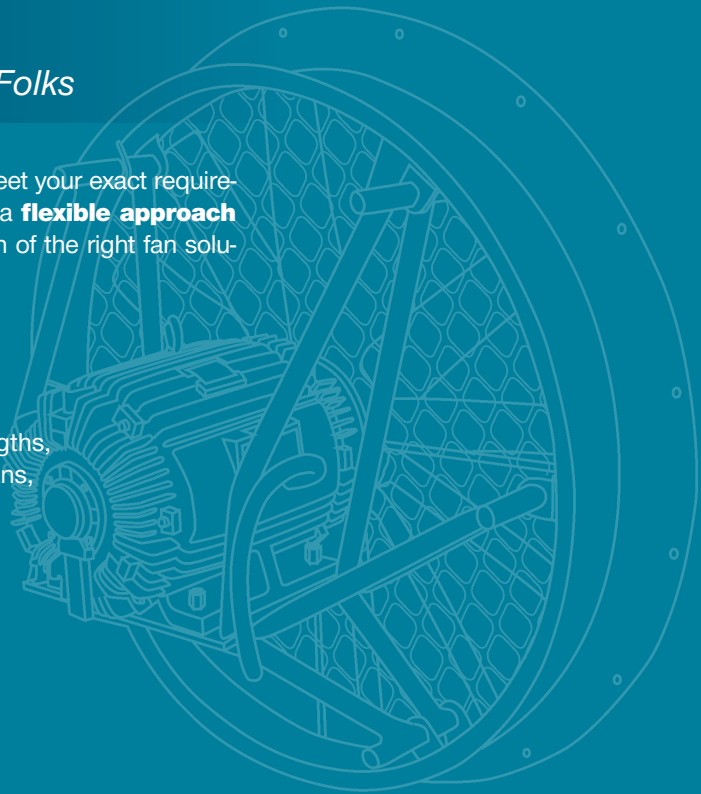
CUSTOM DESIGN

Different Strokes for Different Folks

Twin City Azen is capable of customizing fans to meet your exact requirements. By working closely with you and adopting a **flexible approach** towards designing and building, you can be certain of the right fan solution, every time.

Some Common Customization Includes:

- OEM Specific Testing & Design
- Construction: Customized Diameters and Lengths, Swing-Out and Clamshell Design, Insulated Fans, ABS Type Non – Sparking Construction
- Project Specific Certification from Authorities such as ABS, Lloyds, DNV, UL etc.
- Special Materials & Finishing: Stainless Steel 304 / 316, Aluminum etc.
- Extensive Range of Accessories



FAN SELECTOR

*Instant Access to a Wealth of Information,
at the Click of a Mouse*

To make **complete** and **accurate** fan selections quickly, make use of our comprehensive and user friendly selection program. By simply specifying your performance requirements, our program will be able to provide you with instant access to fan performance curves, sound data, efficiency, speed, motor capacity, drawings and much more, all at the click of a mouse.

For your free selection program CD, please contact **Twin City Azen** directly.



FM x 100
56 x BHP
FM x SP
56 x BHP
Formulas
+ VP
Mechanical Efficiency, ME
Static Efficiency
CFM
Total Pressure, TP = SP + VP
Velocity in Sq. Ft. = $\frac{CFM}{Area}$
Velocity Pressure, VP = $\frac{V^2}{10.44}$
If the density is

100	200	300	400	500	600	700	800	900	1000
1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12.0

WARRANTY

Twin City Azen warrants to the original purchaser that products sold shall be free from defects in workmanship and material under normal use and service for a period of twelve (12) months after the date of shipment from our factory. We will correct by replacing, repairing, or issuing credit (at cost, ex- Azen's factory and at our discretion) provided that (a) Azen is notified in writing within seven (7) days of discovering such defects, (b) the defective unit is returned to us, transportation charges prepaid by purchaser, (c) payment in full has been received by Azen for the said products, and (d) Azen's examination of the unit discloses to our satisfaction that such defects have not been caused by misuse, neglect, improper installation, repair, unauthorized modification, act of God or accident. The correction of these defects by replacement, repair or issuance of credit shall constitute fulfillment of all obligations to purchaser.

DESIGN PROTECTION AND COPYRIGHT

To protect our designs and creations, **Twin City Azen's** products are either registered and / or patented.

Twin City Azen also owns copyright to the entire contents of this catalog. All product performances detailed in this catalog are backed up by extensive in house testing carried out by our engineers. Data and specifications should only be used for the sole purpose of describing the performance characteristics of **Twin City Azen's** products to which they relate.

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