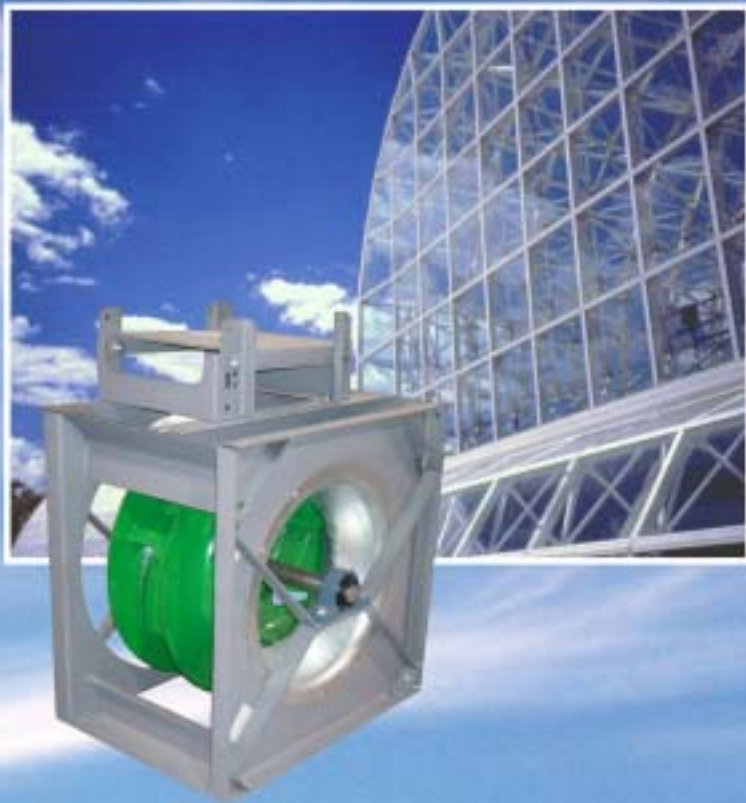


# *Plenum Fans*

*Bulletin PLP 12-08*

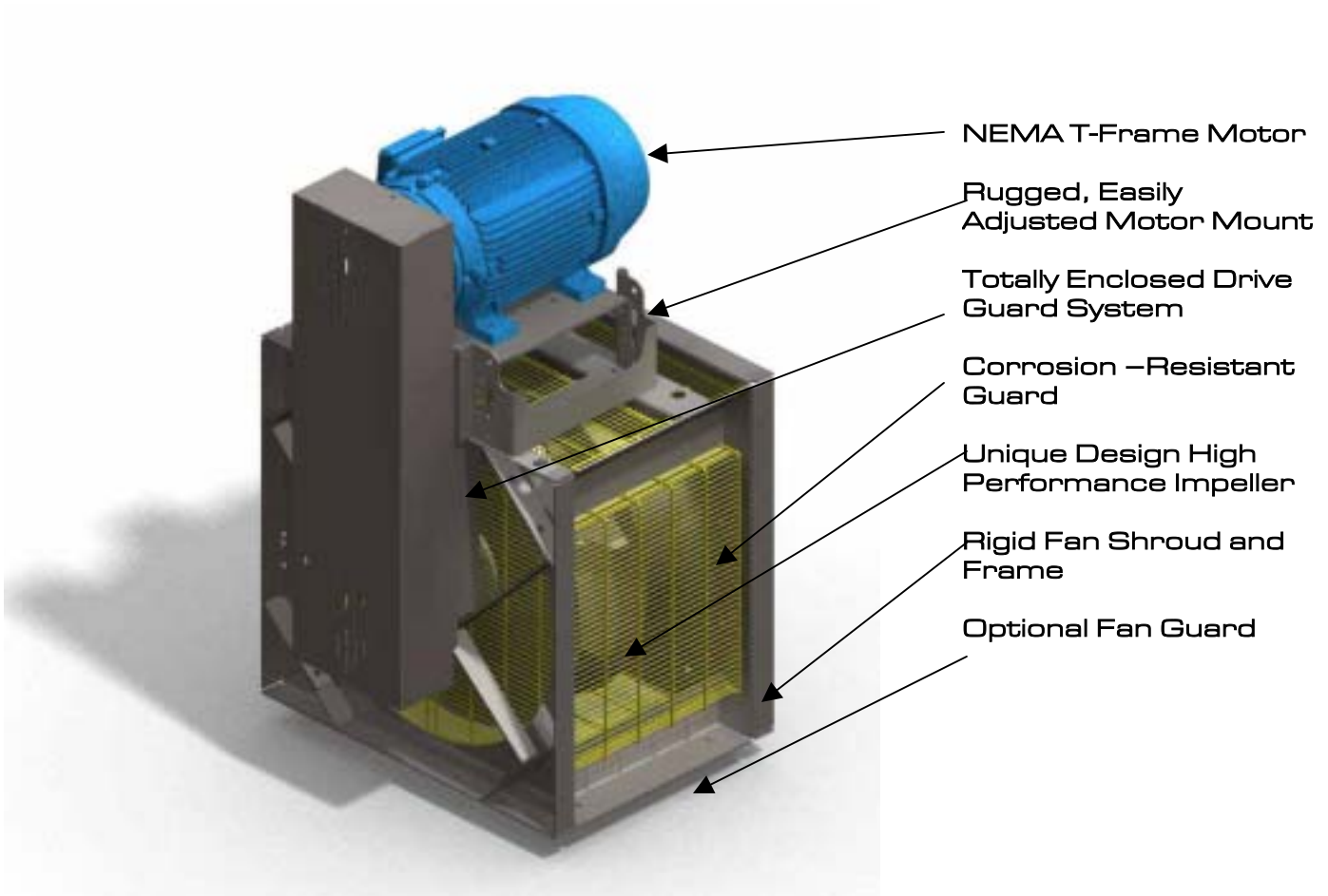


A Flakt Woods Company

**American  
Fan Company**

***Build Quality into your Equipment:***

## ***PL* Plenum Fans from American Fan**



From the *FläktWoods* Engineering Centers comes a new advanced plenum fan design. A product of the latest computerized design techniques, improving upon already proven designs, these fans are designed to save the user cost both in terms of energy consumption and in terms of long trouble-free life. Lower operating speed for a given performance level is the key to this feature, and the *PL* series delivers the goods.

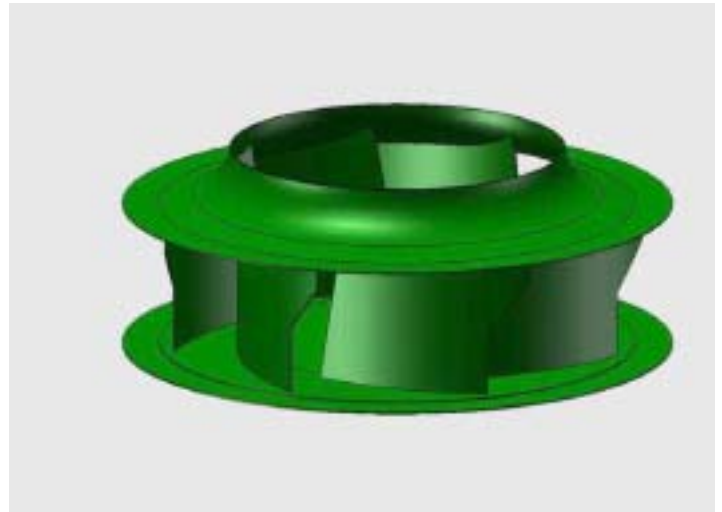
The *PL* features bearing lubrication via extended lubrication lines and an rugged adjustable motor base. Shafts and bearings are sized for long and robust service life. While intended for HVAC applications, the *PL* has heavy-duty construction that makes it a favorite for industrial applications as well

### **PL Plenum Fans Provide:**

- **Small Footprint**
- **High Efficiency**
- **Low Noise**
- **Long Bearing Life**
- **Ease of Attenuation**



American Fan's *PL* Plenum Fans have a unique 7-blade wheel with a specially-developed blade shape that aids performance, lowers noise and increases efficiency. The product of computerized design and analysis done in our *Fläktwoods* Engineering Centers, this feature is the only high performance impeller design of its kind available in North America.



### **Available Accessories:**

- **Belt Guard**
- **Fan Guard**
- **Inlet Collar**
- **Airflow Measuring Station**

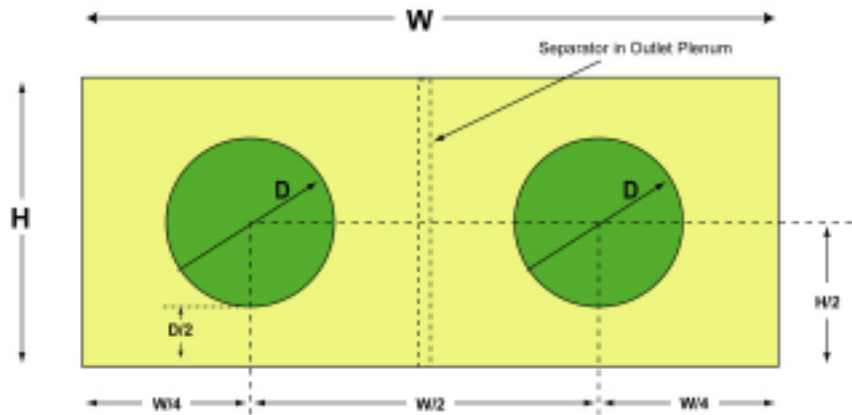
### **Horizontal Drive Arrangements:**

- **Arrg't 3- Center-hung wheel for independent motor mounting**
- **Arrg't 3T- Center-hung wheel and top-mounted motor**



## Integrating *PL* Fans into your Plenum Design

The geometry of plenum design and layout can have large effects on the performance of plenum fans. Minimum proportions, as shown below, should be observed when laying out the plenum design.



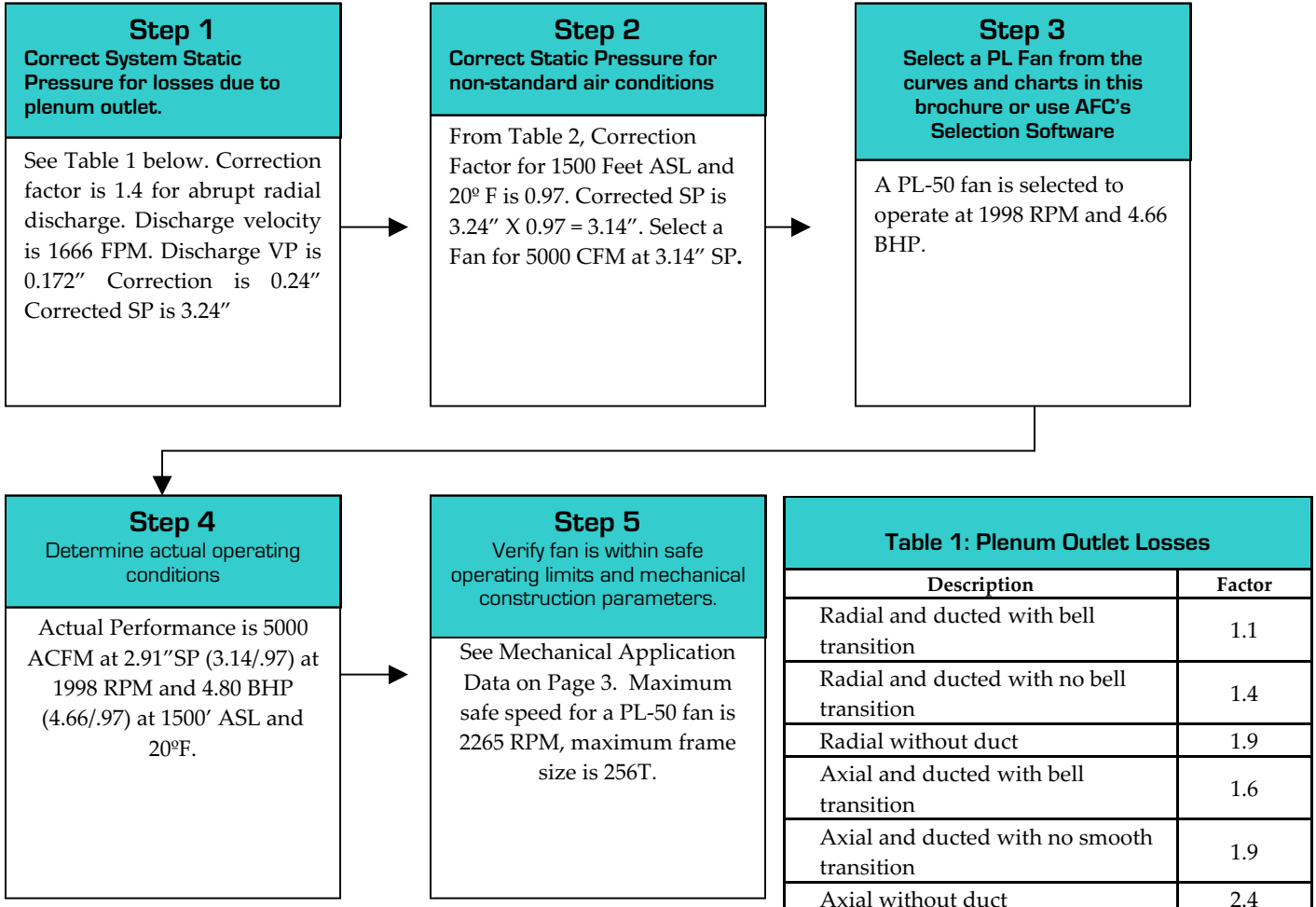
- Avoid tight clearances around the fan to minimize losses
- Keep one fan wheel diameter (min) clear of obstruction to sides and rear
- Locate exhaust take-offs 1 wheel diameter (min) behind the fan backplate
- Use baffles or vortex breakers if inlets are perpendicular to fan shaft
- Keep outlet plenum clear of non-system components to minimize losses

## Mechanical Application Data

Fan Size	Motor Frames Available	Max RPM	Impeller Weight, Lbs	$WK^2$ Pounds-Foot Squared	Bearing L-50 Life, K-hours
31	140T-180T	4480	13.0	1.82	1330.0
35	140T-180T	4030	15.3	3.05	1740.0
40	140T-210T	3410	18.5	4.84	2000.0
45	140T-210T	3180	35.2	10.84	1412.5
50	140T-250T	2780	41.4	16.16	1745.0
56	140T-250T	2530	60.9	29.77	1372.5
63	180T-280T	2200	76.0	52.46	1250.0
71	210T-280T	1850	99.1	84.04	1515.0
80	210T-280T	1565	118.3	131.12	1480.0
90	250T-360T	1410	168.0	248.48	1395.0
100	250T-360T	1180	238.0	415.35	1395.0
112	250T-360T	1150	338.0	749.00	1400.0
125	250T-360T	1025	476.0	1291.0	1400.0

# PL Fan Application Eng

**Example:** Select a PL plenum fan for a radial plenum discharge to move 5000 ACFM at 3.0" WG External Static Pressure and 20°F. The installation is at 1500 feet above sea level. The discharge is a 1' X 3' duct with an abrupt entry.

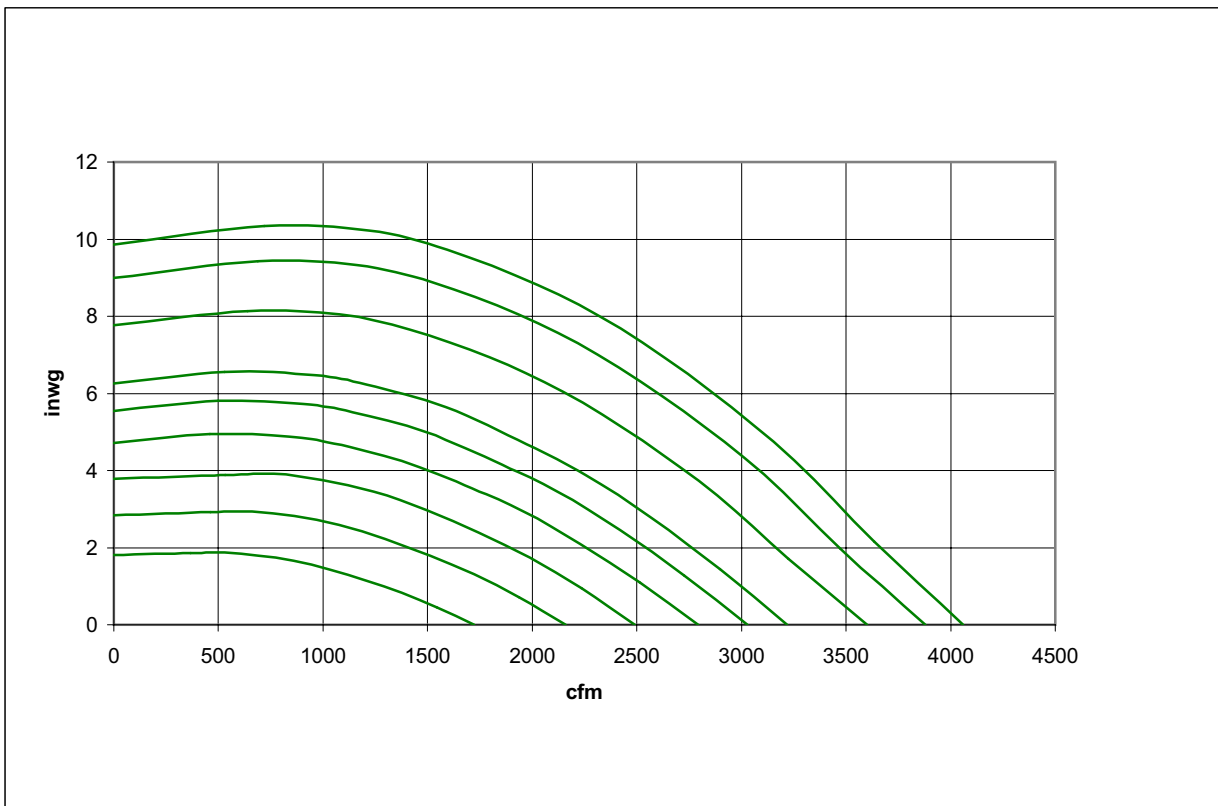
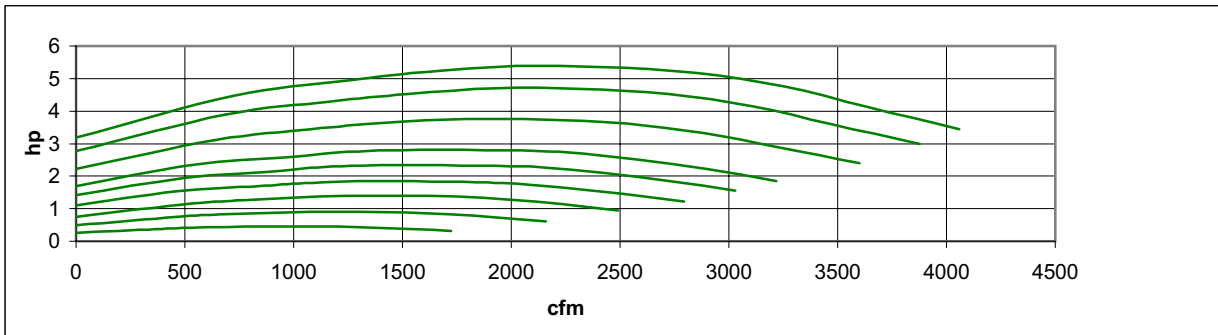


Ref: AMCA Std 201-90

Temperature °F	Feet above Sea Level								
	0	500	1000	1500	2000	4000	6000	8000	10000
-50	.77	.79	.80	.82	.83	.89	.96	1.04	1.12
-25	.82	.84	.85	.87	.89	.95	1.03	1.11	1.19
0	.87	.89	.91	.92	.94	1.01	1.09	1.18	1.26
20	.91	.93	.95	.97	.98	1.06	1.14	1.23	1.32
40	.94	.96	.98	1.00	1.02	1.09	1.18	1.27	1.36
60	.98	1.00	1.02	1.04	1.06	1.14	1.23	1.32	1.42
70	1.00	1.02	1.04	1.06	1.08	1.16	1.25	1.35	1.45
80	1.02	1.04	1.06	1.08	1.10	1.18	1.28	1.38	1.48
100	1.06	1.08	1.10	1.12	1.15	1.23	1.33	1.43	1.54
120	1.09	1.11	1.13	1.16	1.18	1.26	1.36	1.47	1.58

Plenum Fan  
Fan Diameter

Air Performance Data  
315 mm



Optional motor

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
4480	184T-2	7.5
4280	184T-4	5
3975	184T-4	5
3570	184T-4	3
3360	184T-4	3
3100	145T-2	2
2770	143T-2	1.5
2400	143T-2	1
1915	143T-2	0.5





Plenum Fan Sound Performance Data  
 Fan Diameter 315 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
4480	105	101	99	100	96	92	86	80	109	101	25%
4480	106	100	93	97	96	92	87	81	108	100	65%
4480	96	96	92	96	97	94	89	83	103	101	90%
4480	94	96	95	99	98	96	92	88	105	103	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
4280	105	100	98	99	94	91	85	79	108	100	25%
4280	106	98	92	96	94	90	85	80	107	99	65%
4280	96	95	91	95	95	93	88	82	102	99	90%
4280	94	95	93	98	97	95	90	87	104	102	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3975	103	97	97	97	92	89	82	77	106	98	25%
3975	104	95	90	95	92	89	83	78	106	97	65%
3975	94	93	89	94	93	91	85	80	101	98	90%
3975	92	94	91	97	95	93	88	85	102	100	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3570	100	95	95	95	90	86	80	74	103	95	25%
3570	99	94	89	90	88	85	80	75	101	93	65%
3570	99	95	90	91	90	88	82	77	102	94	90%
3570	97	93	93	96	92	90	86	83	102	98	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3360	99	93	94	93	88	84	78	73	102	94	25%
3360	98	92	88	89	86	83	78	74	100	91	65%
3360	98	93	89	90	88	86	80	76	100	93	90%
3360	96	91	92	95	91	88	85	81	101	96	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3100	97	90	92	91	85	82	75	70	100	92	25%
3100	96	89	85	87	84	81	75	71	98	89	65%
3100	96	90	86	88	86	84	77	73	99	91	90%
3100	94	88	90	93	88	86	82	79	99	94	100%

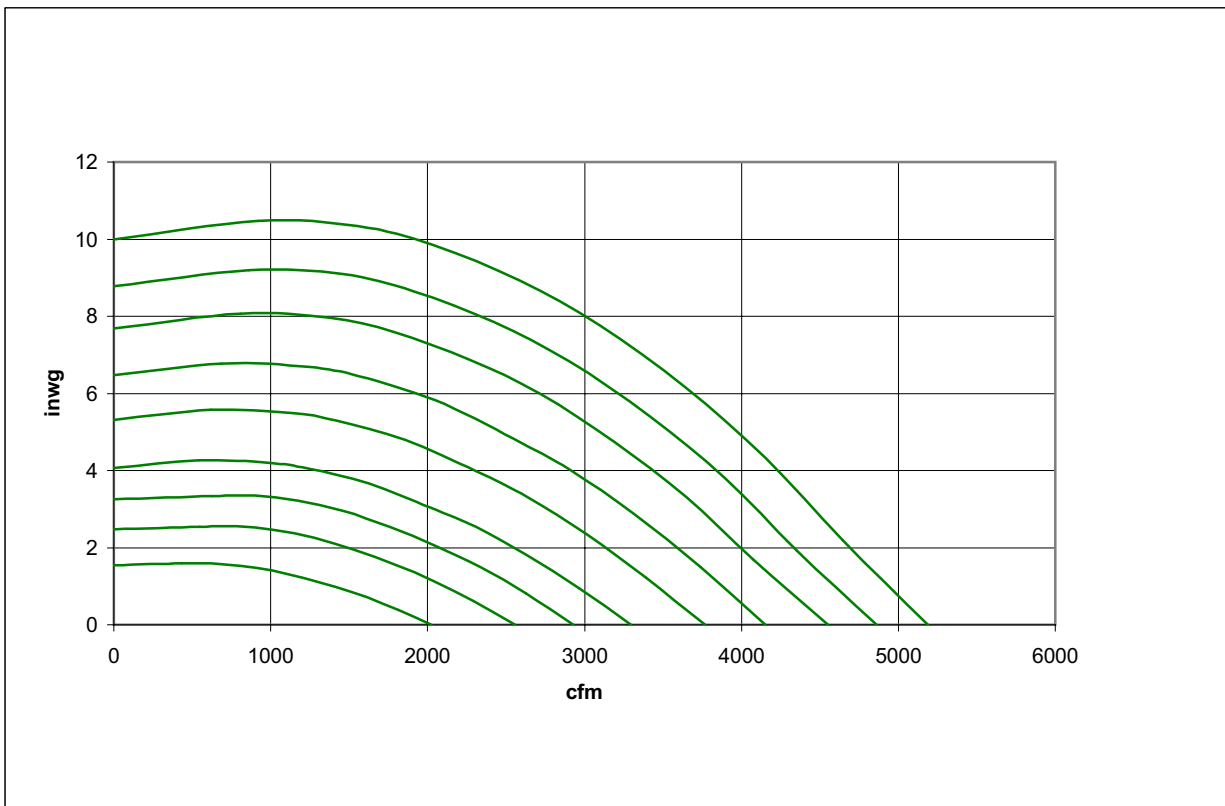
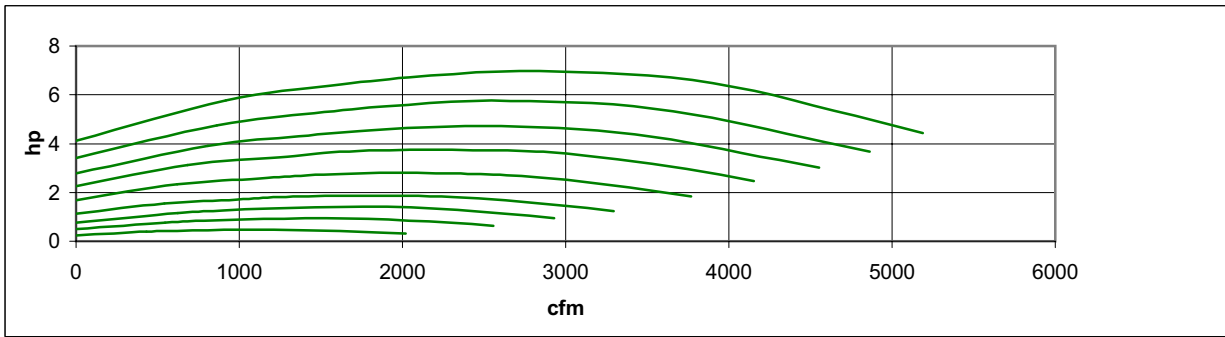
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2770	96	87	89	86	82	78	73	67	98	88	25%
2770	96	84	84	83	81	78	73	68	97	86	65%
2770	95	83	84	85	83	81	76	70	97	88	90%
2770	93	84	88	87	85	83	79	74	96	90	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2400	93	83	86	82	78	74	68	63	94	84	25%
2400	92	79	82	80	77	74	69	64	93	82	65%
2400	91	78	82	82	80	77	71	65	93	84	90%
2400	90	80	86	84	82	79	75	70	93	87	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1915	84	80	80	76	72	67	62	57	87	78	25%
1915	83	75	76	74	72	68	63	58	85	76	65%
1915	82	75	77	76	74	70	64	58	85	78	90%
1915	81	77	80	78	76	73	69	64	86	81	100%



Plenum Fan      Air Performance Data  
 Fan Diameter      355 mm



**Optional motor**

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.

Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
4000	184T-2	7.5
3750	184T-2	7.5
3510	184T-4	5
3220	184T-4	5
2920	184T-4	3
2555	145T-2	2
2275	143T-2	1.5
1985	143T-2	1
1570	143T-2	0.5





Plenum Fan Sound Performance Data  
 Fan Diameter 355 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
4000	107	101	100	101	96	93	86	81	110	102	25%
4000	108	99	93	99	96	92	87	82	109	101	65%
4000	98	97	93	98	97	95	89	84	105	102	90%
4000	96	97	95	101	99	97	92	89	106	104	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3750	106	99	99	99	94	92	84	79	108	100	25%
3750	107	97	92	98	94	91	85	80	108	99	65%
3750	97	96	91	97	96	94	87	82	103	100	90%
3750	95	96	94	100	97	95	90	88	105	102	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3510	105	97	98	98	92	90	82	77	107	98	25%
3510	106	94	90	98	92	89	83	78	107	98	65%
3510	96	94	89	97	94	92	85	80	102	99	90%
3510	94	95	92	100	95	94	88	86	104	101	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3220	102	95	97	96	90	87	80	75	104	96	25%
3220	101	94	90	92	89	86	80	76	102	94	65%
3220	101	95	91	93	91	89	82	78	103	96	90%
3220	99	93	95	98	93	91	87	84	103	99	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2920	99	93	95	93	87	84	77	72	102	94	25%
2920	98	91	88	89	86	83	77	73	100	91	65%
2920	98	92	89	91	88	86	79	75	101	93	90%
2920	96	91	93	95	90	88	84	81	101	96	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2555	95	90	91	89	84	80	73	68	98	90	25%
2555	94	88	85	86	83	79	74	70	96	88	65%
2555	94	89	86	87	85	82	76	72	97	90	90%
2555	92	88	90	91	87	85	81	78	98	93	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2275	94	86	89	85	81	76	70	65	96	86	25%
2275	94	82	84	82	80	76	71	66	95	85	65%
2275	93	81	84	84	82	79	73	67	94	87	90%
2275	91	83	88	86	84	82	77	72	95	89	100%

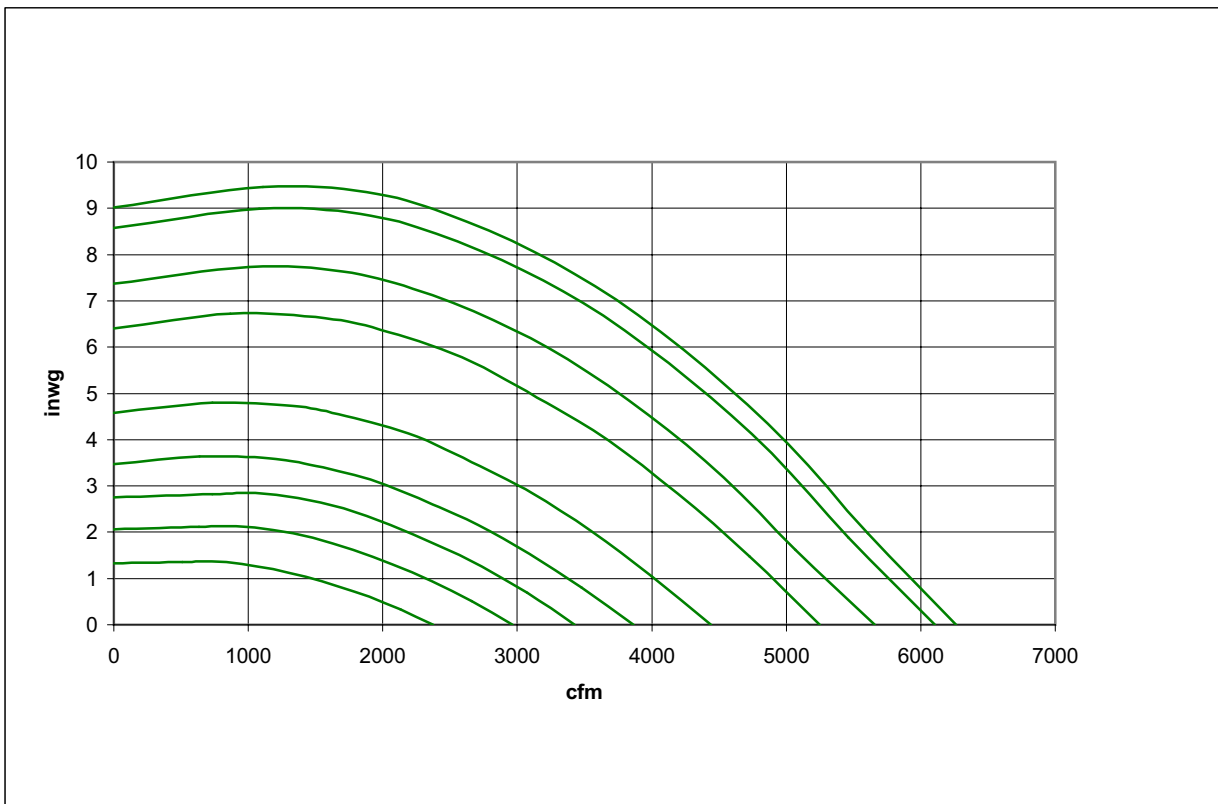
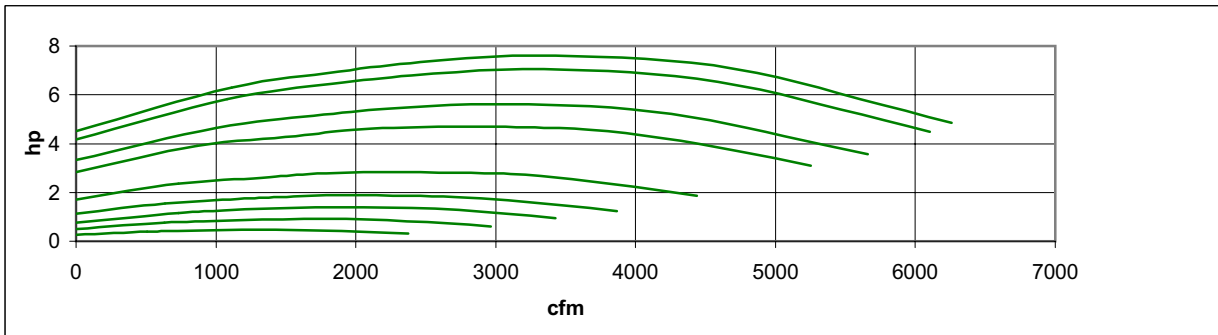
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1985	89	84	85	81	77	72	66	61	92	83	25%
1985	88	79	80	79	76	72	67	62	90	81	65%
1985	87	79	81	81	78	75	69	63	90	83	90%
1985	86	81	84	83	80	78	73	68	91	85	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1570	80	80	78	74	70	65	60	55	85	76	25%
1570	78	75	75	73	70	66	61	56	82	75	65%
1570	77	75	76	75	73	68	62	56	82	77	90%
1570	77	78	79	77	75	71	67	62	85	79	100%



Plenum Fan  
Fan Diameter

Air Performance Data  
400 mm



Optional motor

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
3375	215T-4	10
3290	184T-2	7.5
3050	184T-2	7.5
2845	184T-4	5
2405	184T-4	3
2095	145T-2	2
1860	143T-2	1.5
1610	143T-2	1
1290	143T-2	0.5



Plenum Fan Sound Performance Data  
 Fan Diameter 400 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3375	107	100	101	100	95	92	84	79	110	101	25%
3375	108	96	93	100	94	91	85	80	109	100	65%
3375	99	96	92	100	97	94	87	82	105	101	90%
3375	97	98	95	102	98	96	91	89	106	104	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3290	106	99	100	100	94	91	84	79	109	100	25%
3290	107	96	93	100	94	91	85	80	108	100	65%
3290	98	96	92	99	96	94	87	82	104	101	90%
3290	96	97	95	102	97	96	90	88	106	103	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3050	104	98	98	97	92	89	81	76	107	98	25%
3050	104	94	92	97	92	88	82	77	106	98	65%
3050	96	94	91	97	94	91	84	79	102	99	90%
3050	95	95	94	100	95	93	88	86	104	101	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2845	102	96	98	96	90	87	80	75	105	97	25%
2845	101	94	91	92	89	86	80	76	103	94	65%
2845	101	95	92	93	91	89	82	78	103	96	90%
2845	99	94	96	98	93	91	87	84	104	99	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2405	97	93	94	91	86	82	75	70	100	92	25%
2405	96	90	88	88	85	81	76	72	98	90	65%
2405	96	91	89	89	87	84	78	74	99	92	90%
2405	94	91	93	93	89	87	83	80	100	95	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2095	92	90	90	87	82	77	71	66	97	88	25%
2095	91	86	85	84	81	77	72	68	94	86	65%
2095	92	87	86	86	84	79	74	70	95	88	90%
2095	90	88	91	89	86	83	79	76	96	91	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1860	90	86	87	83	79	74	68	63	94	84	25%
1860	89	82	83	81	78	74	69	64	91	83	65%
1860	88	81	83	83	81	77	71	65	91	85	90%
1860	87	84	87	85	83	80	75	70	93	87	100%

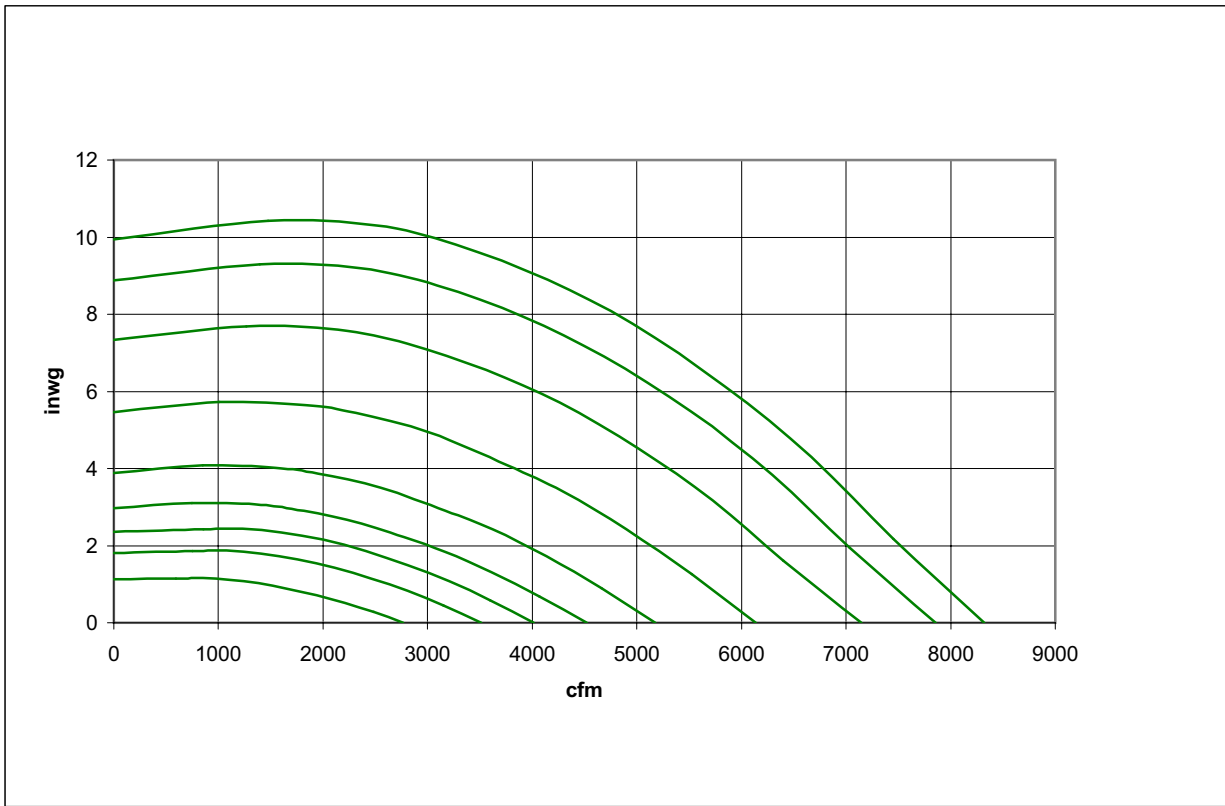
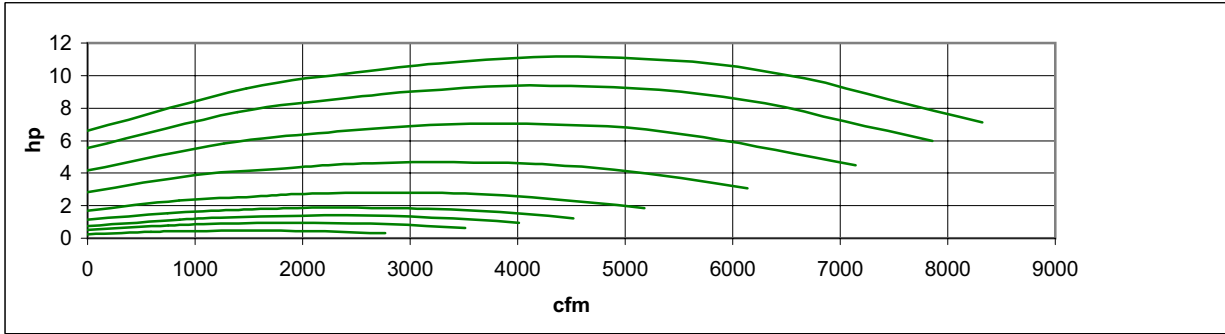
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1610	85	84	83	79	75	69	64	59	89	80	25%
1610	82	79	79	77	74	70	65	60	86	79	65%
1610	81	79	80	79	77	72	66	60	87	81	90%
1610	82	82	83	81	79	76	71	66	89	84	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1290	77	81	77	73	69	63	58	53	84	74	25%
1290	73	76	73	72	68	64	59	54	80	73	65%
1290	72	76	75	74	71	66	60	54	81	76	90%
1290	74	79	77	76	73	70	65	60	84	78	100%



Plenum Fan  
Fan Diameter

Air Performance Data  
450 mm



Optional motor

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
3150	215T-4	12.5
2975	215T-4	10
2705	215T-4	7.5
2335	184T-4	5
1970	182T-2	3
1720	145T-2	2
1530	143T-2	1.5
1340	143T-2	1
1055	143T-2	0.5



Plenum Fan Sound Performance Data  
Fan Diameter 450 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
3150	109	102	103	102	96	94	86	81	111	103	25%
3150	109	98	96	102	96	93	87	82	110	102	65%
3150	100	98	95	101	98	96	89	84	107	103	90%
3150	99	99	98	104	100	98	92	90	108	105	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2975	107	101	101	100	95	92	84	79	109	101	25%
2975	107	97	95	100	95	91	85	80	108	100	65%
2975	99	96	94	100	97	94	87	82	105	102	90%
2975	98	98	97	102	98	96	91	89	107	104	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2705	103	99	99	97	93	89	82	77	107	98	25%
2705	103	94	94	97	92	88	83	78	105	98	65%
2705	97	94	93	97	95	91	85	80	103	99	90%
2705	96	95	96	100	96	93	89	87	104	101	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2335	99	96	97	94	89	84	78	73	103	95	25%
2335	98	92	91	91	88	84	78	74	101	93	65%
2335	99	93	92	92	90	86	80	76	102	95	90%
2335	97	94	96	96	92	89	86	83	103	98	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1970	94	93	93	89	84	79	73	68	99	90	25%
1970	93	88	88	86	83	78	74	70	96	88	65%
1970	93	89	89	88	86	81	76	72	97	90	90%
1970	91	91	93	91	88	85	81	78	98	93	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1720	89	90	89	84	81	75	69	64	95	87	25%
1720	88	84	85	83	80	74	70	66	92	85	65%
1720	89	85	86	85	83	77	72	68	93	87	90%
1720	87	88	91	87	85	81	78	75	95	90	100%

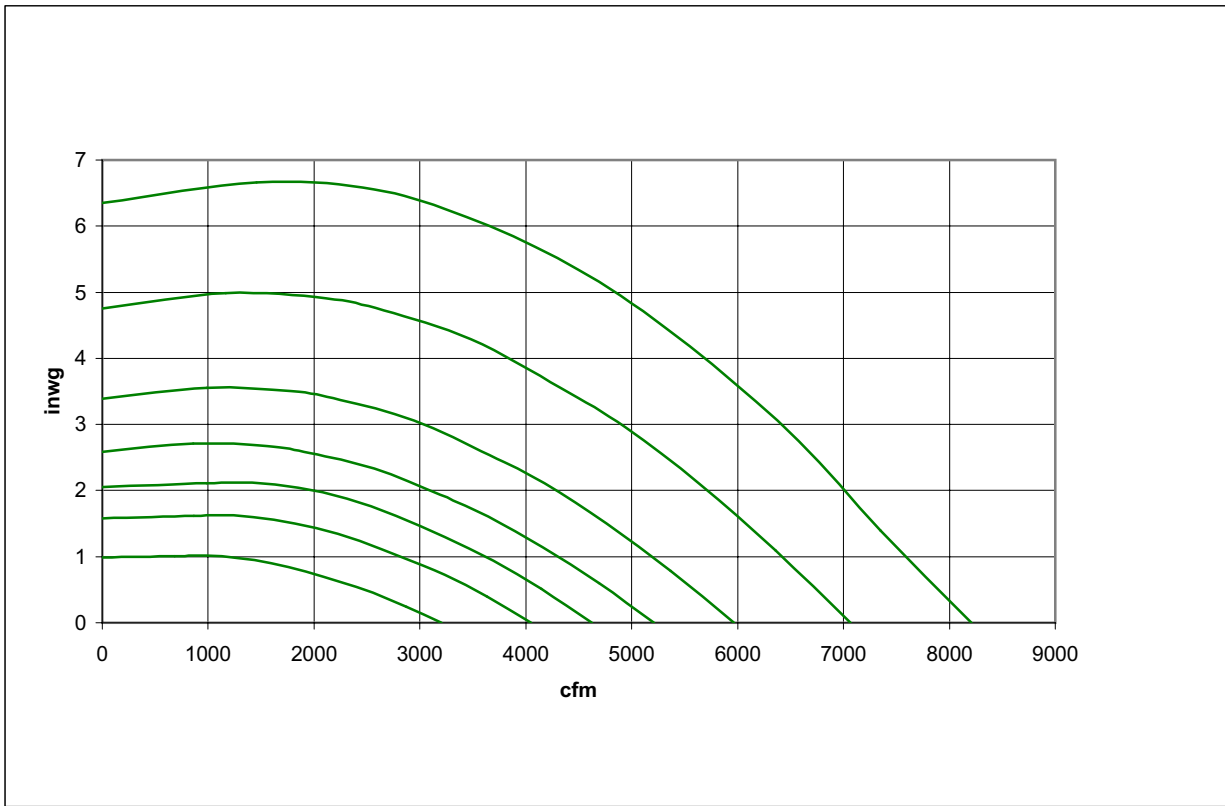
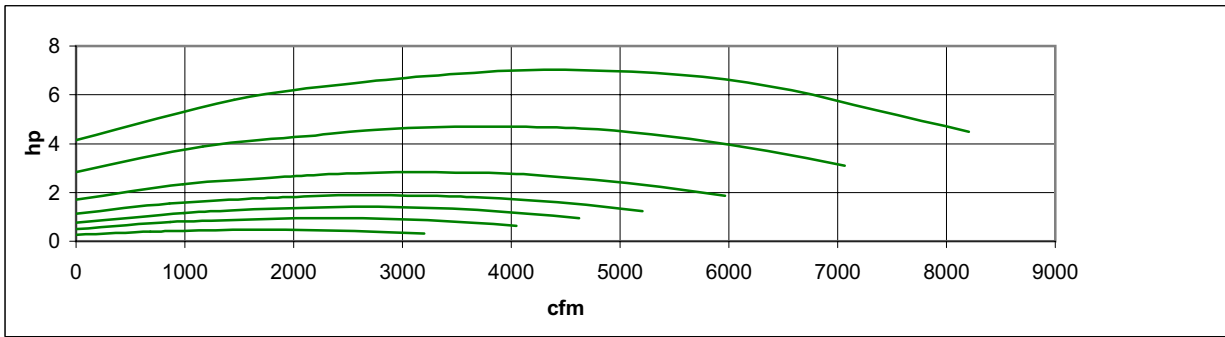
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1530	87	87	85	81	77	71	66	61	92	83	25%
1530	84	82	81	79	77	72	67	62	88	81	65%
1530	83	82	83	81	79	74	68	62	89	84	90%
1530	84	85	85	83	81	78	73	68	91	86	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1340	82	85	81	77	73	67	62	57	88	79	25%
1340	78	80	78	76	73	68	63	58	85	78	65%
1340	77	80	80	78	76	70	64	58	86	80	90%
1340	79	84	82	80	78	74	69	64	88	83	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1055	77	79	75	71	66	60	55	50	82	72	25%
1055	73	74	72	70	66	61	56	51	79	72	65%
1055	72	75	74	72	69	63	57	51	80	74	90%
1055	74	78	76	74	72	67	62	57	83	76	100%



Plenum Fan      Air Performance Data  
 Fan Diameter      500 mm



**Optional motor**

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
 Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
2265	184T-2	7.5
1960	184T-4	5
1655	184T-4	3
1445	145T-2	2
1285	143T-2	1.5
1125	143T-4	1
890	143T-2	0.5





Plenum Fan Sound Performance Data  
 Fan Diameter 500 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2265	101	98	99	95	91	86	80	75	105	97	25%
2265	99	92	96	95	91	86	81	76	103	96	65%
2265	95	92	95	96	93	88	83	78	102	98	90%
2265	95	94	98	98	95	91	88	86	104	100	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1960	97	96	96	92	87	82	76	71	102	93	25%
1960	96	91	91	90	86	82	77	73	99	91	65%
1960	96	92	92	91	89	84	79	75	100	93	90%
1960	94	94	96	94	91	88	84	81	102	96	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1655	91	93	92	87	83	77	71	66	97	89	25%
1655	90	86	87	85	82	76	72	68	94	87	65%
1655	91	87	88	87	85	79	74	70	95	89	90%
1655	89	91	93	89	87	83	80	77	98	92	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1445	88	90	88	83	79	72	67	62	94	85	25%
1445	86	83	84	82	78	72	68	64	91	83	65%
1445	87	84	86	84	81	74	70	66	92	85	90%
1445	86	88	90	86	83	80	77	74	95	89	100%

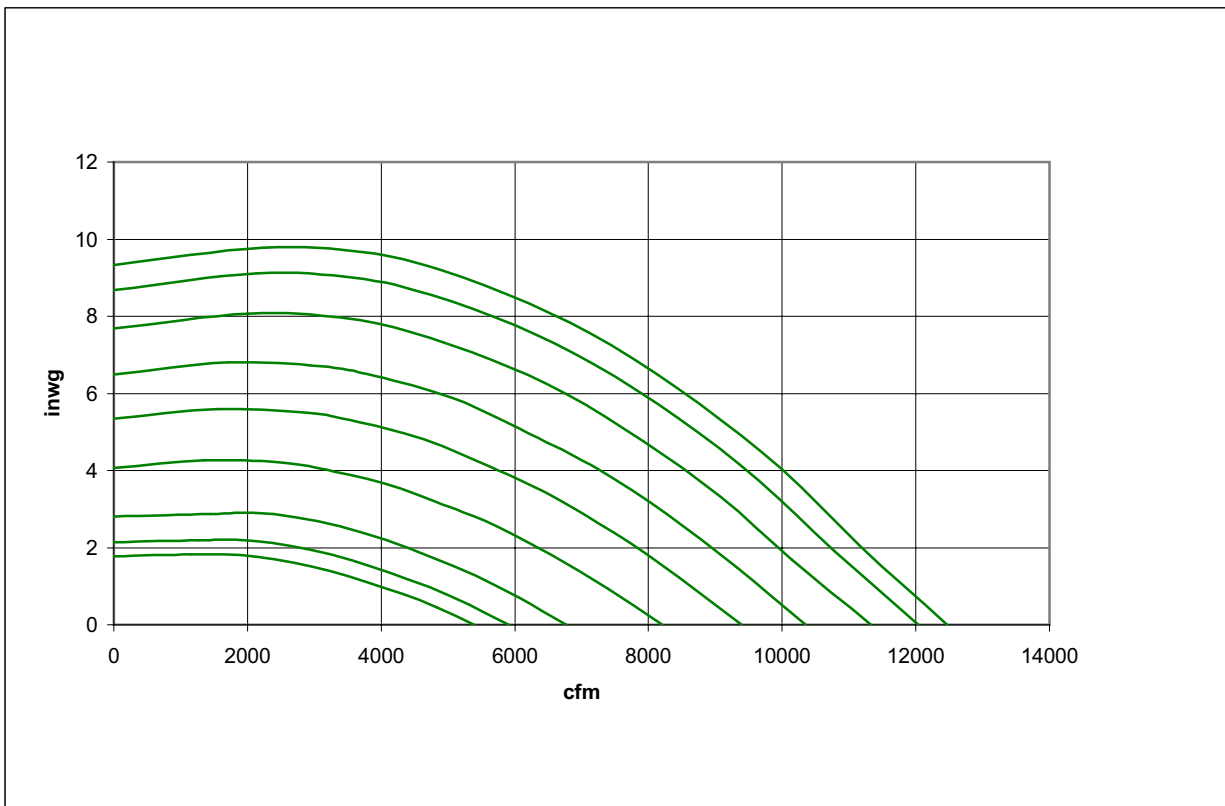
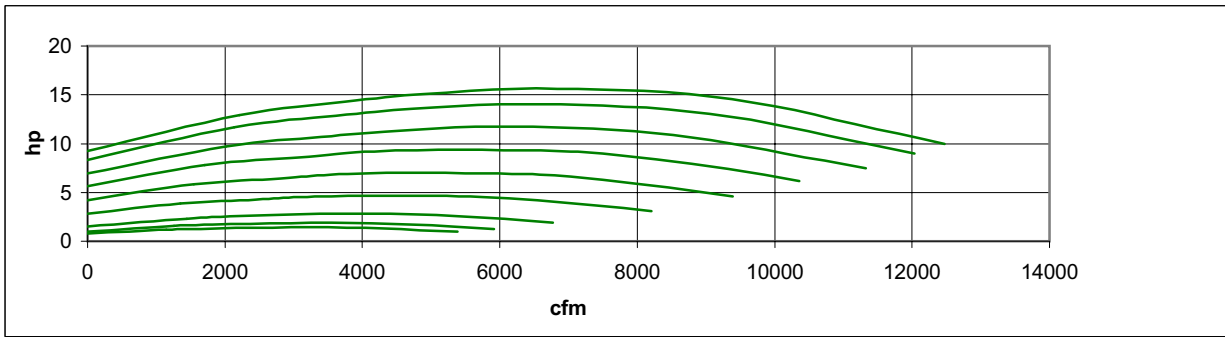
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1285	83	87	83	79	75	69	64	59	90	81	25%
1285	79	82	80	78	75	70	65	60	87	80	65%
1285	78	82	82	80	78	72	66	60	88	82	90%
1285	80	86	84	82	80	76	71	66	90	85	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1125	81	84	80	76	71	65	60	55	87	77	25%
1125	77	79	77	75	71	66	61	56	84	77	65%
1125	76	79	79	77	74	68	62	56	85	79	90%
1125	78	83	81	79	77	72	67	62	87	81	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
890	77	77	73	69	64	59	54	49	81	71	25%
890	73	73	71	69	65	60	55	50	78	70	65%
890	72	74	73	71	67	61	55	49	79	72	90%
890	75	77	75	73	70	66	61	56	82	75	100%



Plenum Fan      Air Performance Data  
 Fan Diameter      560 mm



**Optional motor**

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
 Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
2450	256T-4	20
2365	254T-4	15
2225	215T-2	12.5
2045	215T-2	10
1855	184T-2	7.5
1620	184T-2	5
1340	145T-2	3
1170	145T-4	2
1066	143T-2	1.5



Plenum Fan Sound Performance Data  
 Fan Diameter 560 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2450	107	103	104	101	97	92	85	80	111	102	25%
2450	106	98	100	101	96	92	86	81	109	102	65%
2450	101	97	99	101	99	94	88	83	107	103	90%
2450	100	99	102	103	100	97	93	91	109	105	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2365	106	103	103	100	96	91	84	79	110	101	25%
2365	104	97	100	100	95	91	85	80	108	101	65%
2365	100	96	99	101	98	93	87	82	106	102	90%
2365	100	99	102	102	100	96	92	90	108	104	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2225	104	102	102	98	94	89	83	78	108	100	25%
2225	102	95	99	98	94	89	84	79	106	99	65%
2225	98	95	98	99	96	91	86	81	105	101	90%
2225	98	97	101	101	98	94	91	89	107	103	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2045	102	100	100	96	92	87	81	76	106	98	25%
2045	101	96	95	94	91	86	81	77	104	96	65%
2045	101	97	96	96	94	89	83	79	105	98	90%
2045	99	98	100	99	96	92	89	86	106	101	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1855	99	98	98	93	89	84	78	73	104	95	25%
1855	98	93	93	92	88	83	79	75	101	93	65%
1855	98	94	94	93	91	86	81	77	102	95	90%
1855	96	96	99	96	93	90	86	83	104	99	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1620	94	96	95	89	86	79	74	69	100	92	25%
1620	93	89	90	88	85	79	75	71	97	90	65%
1620	94	90	91	90	88	81	77	73	98	92	90%
1620	92	94	96	92	90	86	83	80	101	95	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1340	88	91	88	84	80	74	69	64	95	86	25%
1340	84	86	85	83	80	75	70	65	91	85	65%
1340	83	86	86	85	83	77	71	65	92	87	90%
1340	85	90	89	87	85	81	76	71	95	89	100%

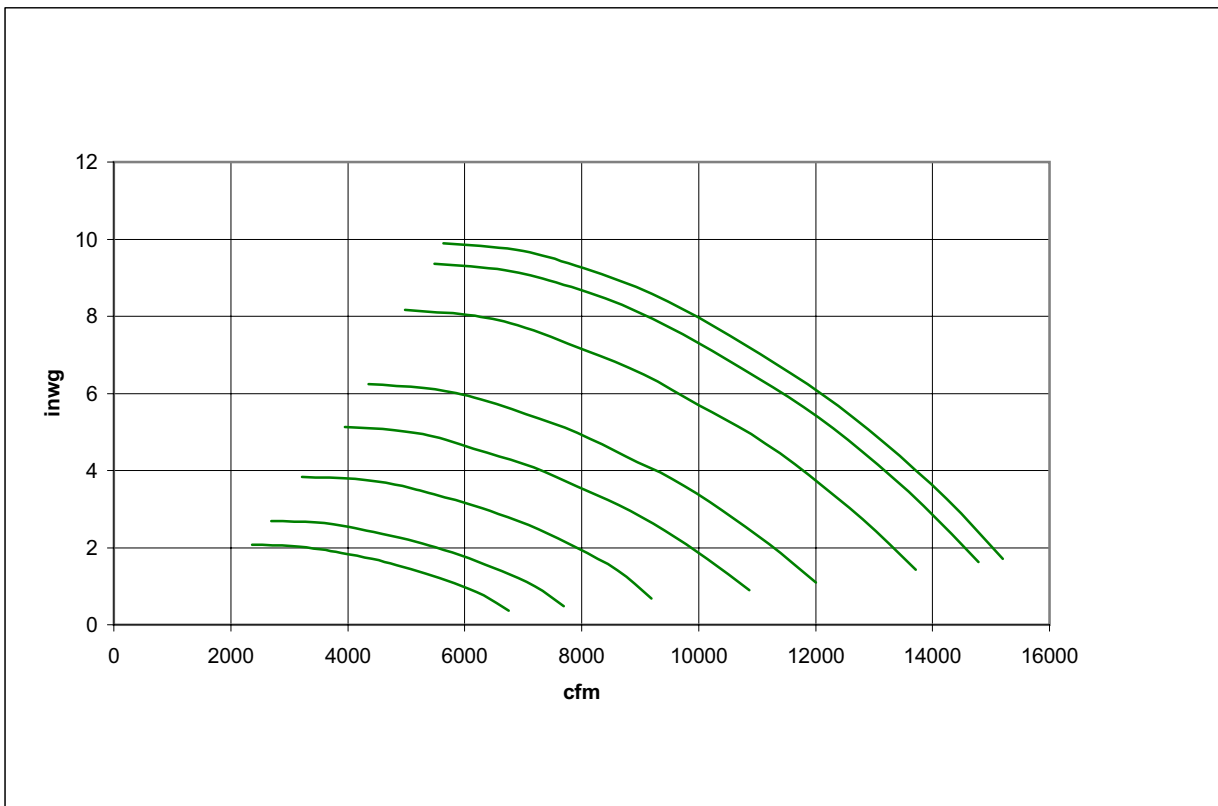
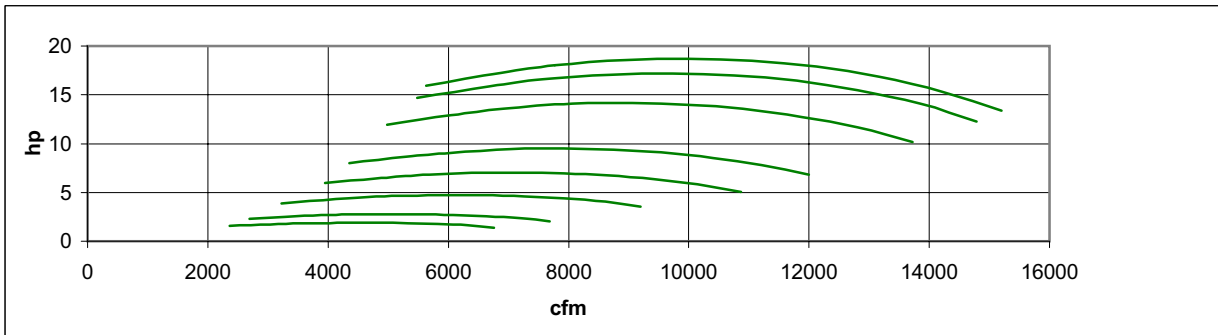
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1170	85	88	84	80	76	70	65	60	91	82	25%
1170	81	83	81	79	76	71	66	61	88	81	65%
1170	80	84	83	81	79	73	67	61	89	83	90%
1170	82	87	85	83	81	77	72	67	92	86	100%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1066	84	86	82	78	73	67	62	57	89	79	25%
1066	79	81	79	77	73	68	63	58	86	79	65%
1066	79	82	81	79	76	70	64	58	87	81	90%
1066	81	85	83	81	78	74	69	64	90	83	100%



Plenum Fan  
Fan Diameter

Air Performance Data  
630 mm



280 option available

Optional motor

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
2200	256T-4	20
2140	256T-4	20
2000	254T-4	15
1750	215T-4	10
1585	213T-4	7.5
1375	184T4	5
1150	182T-4	3
1010	145T-4	2



Plenum Fan Sound Performance Data  
 Fan Diameter 630 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2200	93	98	106	105	104	100	99	87	111	108	15%
2200	92	95	105	104	102	97	92	83	109	106	50%
2200	86	93	105	102	100	94	87	80	108	104	70%
2200	75	92	103	99	97	91	85	80	106	101	88%
2200	92	96	105	98	95	89	83	79	107	101	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2140	92	97	106	104	103	99	98	86	110	108	15%
2140	91	95	105	103	102	96	91	82	109	105	50%
2140	85	93	104	101	99	93	86	79	107	103	70%
2140	74	92	103	98	97	91	84	79	105	101	88%
2140	92	96	104	97	94	88	82	79	106	100	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
2000	91	97	104	103	101	97	96	83	109	106	15%
2000	90	94	103	102	100	94	88	79	107	104	50%
2000	84	93	103	99	97	91	84	77	105	101	70%
2000	74	92	101	96	95	89	82	77	103	99	88%
2000	91	95	102	95	92	86	80	77	104	98	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1750	89	95	101	100	98	94	90	78	106	102	15%
1750	88	93	100	99	95	90	84	75	104	100	50%
1750	83	92	99	96	93	87	80	73	102	98	70%
1750	75	91	97	93	90	84	78	73	100	95	88%
1750	89	94	98	92	88	82	77	73	101	94	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1585	88	95	99	97	95	92	86	74	103	100	15%
1585	86	93	97	96	92	87	80	71	102	97	50%
1585	82	92	96	94	90	84	77	70	100	95	70%
1585	76	90	94	91	87	81	75	70	98	92	88%
1585	87	93	95	89	85	79	74	71	98	91	98%

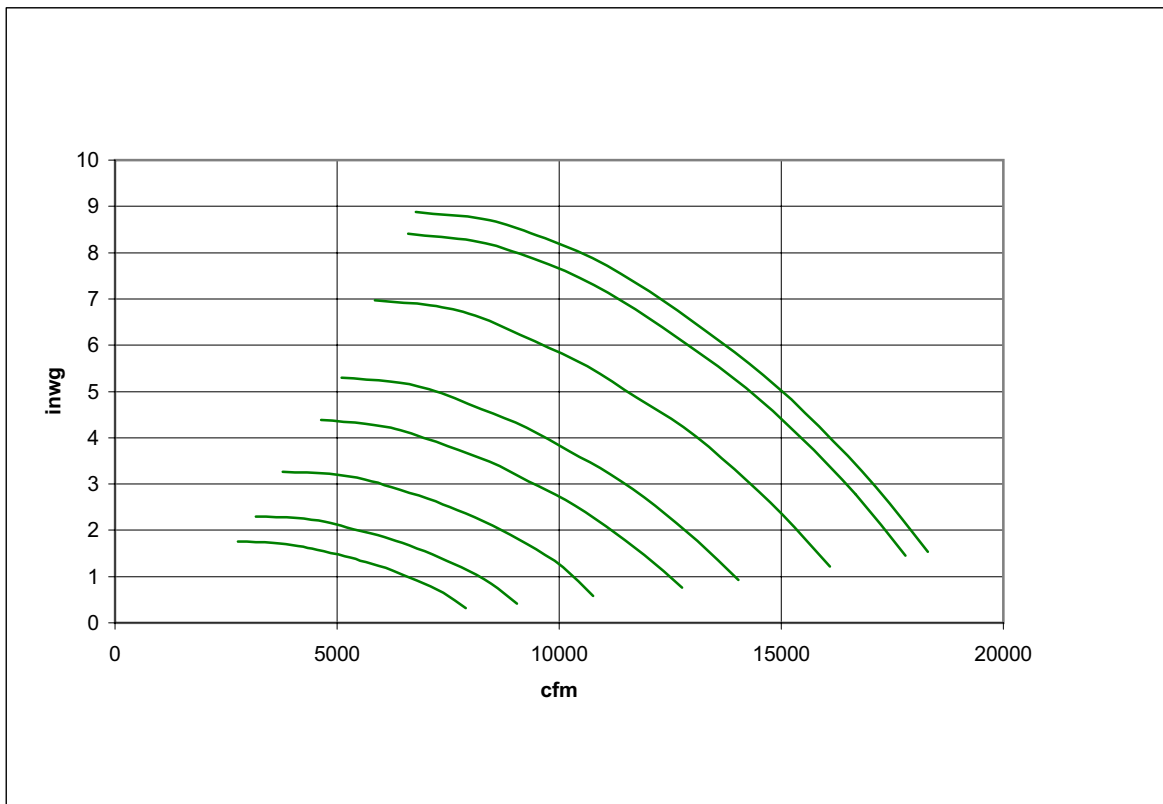
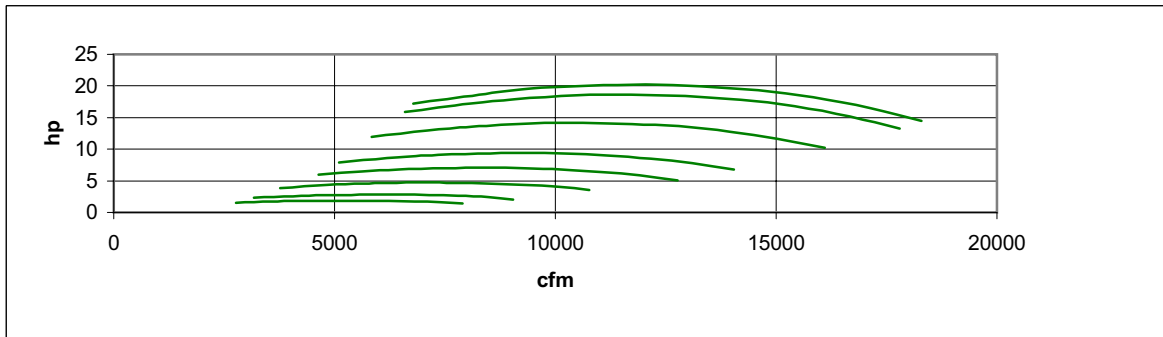
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1375	86	93	95	94	91	89	81	68	100	96	15%
1375	84	92	94	93	88	83	75	66	98	94	50%
1375	81	91	92	90	86	79	72	66	97	91	70%
1375	76	90	90	87	83	77	71	66	94	89	88%
1375	85	92	90	86	81	75	70	67	95	87	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1150	83	91	91	90	86	85	74	61	97	92	15%
1150	81	90	90	88	83	78	69	60	95	89	50%
1150	79	90	88	86	80	73	67	60	93	86	70%
1150	77	88	85	83	78	71	66	61	91	84	88%
1150	82	90	84	81	75	69	66	62	92	82	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1010	82	89	88	87	82	81	68	56	94	88	15%
1010	79	88	87	85	79	74	65	56	92	85	50%
1010	78	88	84	83	76	69	63	56	91	83	70%
1010	77	86	81	80	74	67	62	58	89	80	88%
1010	80	88	81	78	71	65	62	59	89	79	98%



Plenum Fan Air Performance Data  
 Fan Diameter 710 mm



**Optional Motor**

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
 Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
1850	284T-4	25
1800	256T-4	20
1640	254T-4	15
1430	256T-4	10
1300	213T-4	7.5
1125	184T-4	5
945	213T-6	3
825	184T-6	2





Plenum Fan Air Performance Data  
 Fan Diameter 710 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1850	94	100	106	105	103	99	96	84	110	107	15%
1850	92	97	105	103	101	95	89	80	109	105	50%
1850	87	96	104	101	98	92	85	79	107	103	70%
1850	78	95	102	98	96	90	83	79	105	100	88%
1850	93	98	103	97	93	87	82	78	106	99	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1800	93	99	105	104	102	99	95	83	110	107	15%
1800	92	97	104	103	100	94	88	79	108	104	50%
1800	87	96	103	100	98	91	84	78	106	102	70%
1800	79	95	101	97	95	89	82	78	104	99	88%
1800	93	98	102	96	92	86	81	78	105	98	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1640	92	98	103	102	99	96	91	79	108	104	15%
1640	90	97	102	101	97	92	85	76	106	102	50%
1640	86	95	101	98	95	88	81	75	104	99	70%
1640	79	94	99	95	92	86	80	75	102	97	88%
1640	91	97	99	94	90	83	79	75	103	96	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1430	90	97	100	99	95	93	86	73	105	101	15%
1430	88	95	99	97	93	88	80	71	103	98	50%
1430	85	95	97	95	91	84	77	71	101	96	70%
1430	80	93	95	92	88	82	76	71	99	93	88%
1430	89	96	95	90	85	79	75	72	100	92	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1300	89	96	98	96	93	91	82	70	103	98	15%
1300	87	95	96	95	90	85	77	68	101	96	50%
1300	84	94	95	93	88	81	74	68	99	93	70%
1300	80	93	92	90	85	79	73	68	97	91	88%
1300	87	95	92	88	82	76	72	69	98	89	98%

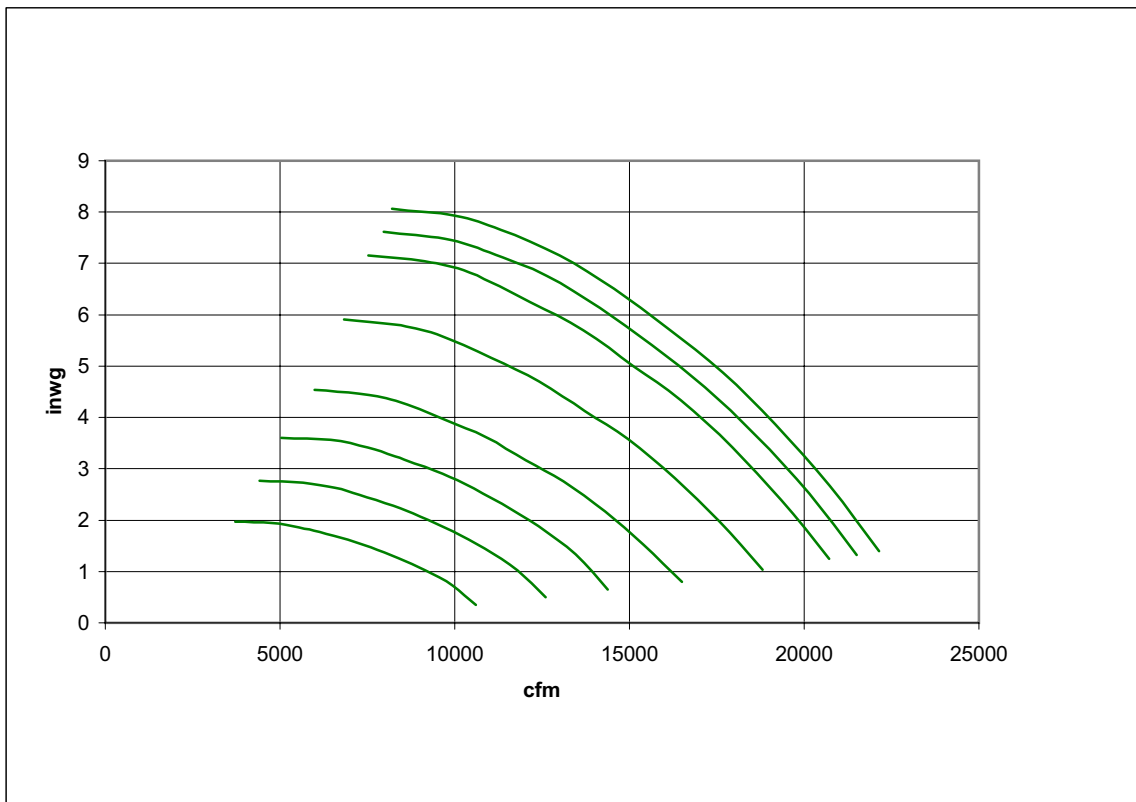
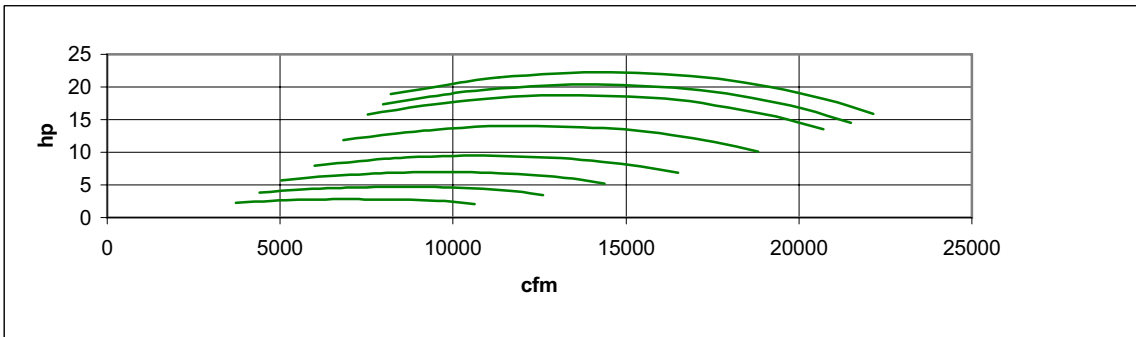
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1125	87	95	94	93	89	88	76	64	100	95	15%
1125	84	94	93	91	86	81	72	63	98	92	50%
1125	82	93	91	89	83	76	70	63	97	89	70%
1125	81	92	88	86	81	74	69	64	95	87	88%
1125	85	94	87	84	78	72	69	65	95	85	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
945	85	91	90	88	85	82	69	57	96	90	15%
945	83	90	89	87	81	75	66	57	94	87	50%
945	81	90	86	84	78	71	64	58	93	85	70%
945	80	88	83	81	75	69	64	59	91	82	88%
945	83	89	82	79	73	67	64	61	91	81	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
825	84	88	87	85	81	77	64	52	93	86	15%
825	82	87	86	82	77	70	61	52	91	83	50%
825	80	86	83	80	73	66	60	53	89	81	70%
825	79	84	80	77	71	65	60	55	87	78	88%
825	82	85	79	75	69	64	60	57	88	77	98%



Plenum Fan Air Performance Data  
 Fan Diameter 800 mm



Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.

Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
1565	284T-4	25
1520	284T-4	25
1475	256T-4	20
1340	284T-6	15
1175	256T-6	10
1050	254T-6	7.5
920	215T-6	5
775	213T-6	3



Plenum Fan Sound Performance Data  
 Fan Diameter 800 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1565	95	102	106	104	102	99	93	81	110	107	15%
1565	93	100	104	103	99	94	87	78	109	104	50%
1565	89	99	103	101	97	90	83	77	107	102	70%
1565	83	98	101	98	94	88	82	77	104	99	88%
1565	94	100	102	96	92	86	81	78	105	98	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1520	95	101	105	104	101	98	92	79	110	106	15%
1520	93	100	104	102	98	93	86	77	108	103	50%
1520	89	99	102	100	96	90	83	76	106	101	70%
1520	83	97	100	97	93	87	81	77	104	98	88%
1520	94	100	101	96	91	85	80	77	105	97	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1475	94	101	104	103	100	98	91	78	109	105	15%
1475	92	99	103	102	98	92	85	76	107	103	50%
1475	89	98	102	99	95	89	82	75	105	100	70%
1475	83	97	99	96	93	86	80	76	103	98	88%
1475	93	100	100	95	90	84	79	76	104	96	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1340	93	100	102	101	97	96	87	74	107	103	15%
1340	91	99	101	99	95	89	82	73	105	100	50%
1340	88	98	99	97	92	85	79	72	103	98	70%
1340	84	97	96	94	90	83	78	73	101	95	88%
1340	92	99	97	92	87	81	77	74	102	94	98%
1340	97	102	98	94	88	82	78	74	105	95	

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1175	91	99	99	98	94	93	82	69	104	99	15%
1175	89	98	98	96	91	86	77	68	103	97	50%
1175	86	97	95	94	88	81	75	68	101	94	70%
1175	84	96	93	91	86	79	74	69	99	92	88%
1175	89	98	92	89	83	77	73	70	100	90	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1050	89	98	96	95	90	90	77	65	102	97	15%
1050	87	96	95	93	87	82	73	64	100	94	50%
1050	85	96	92	91	85	78	71	65	99	91	70%
1050	84	95	89	88	82	75	71	66	97	89	88%
1050	88	96	89	86	79	74	70	67	98	87	98%

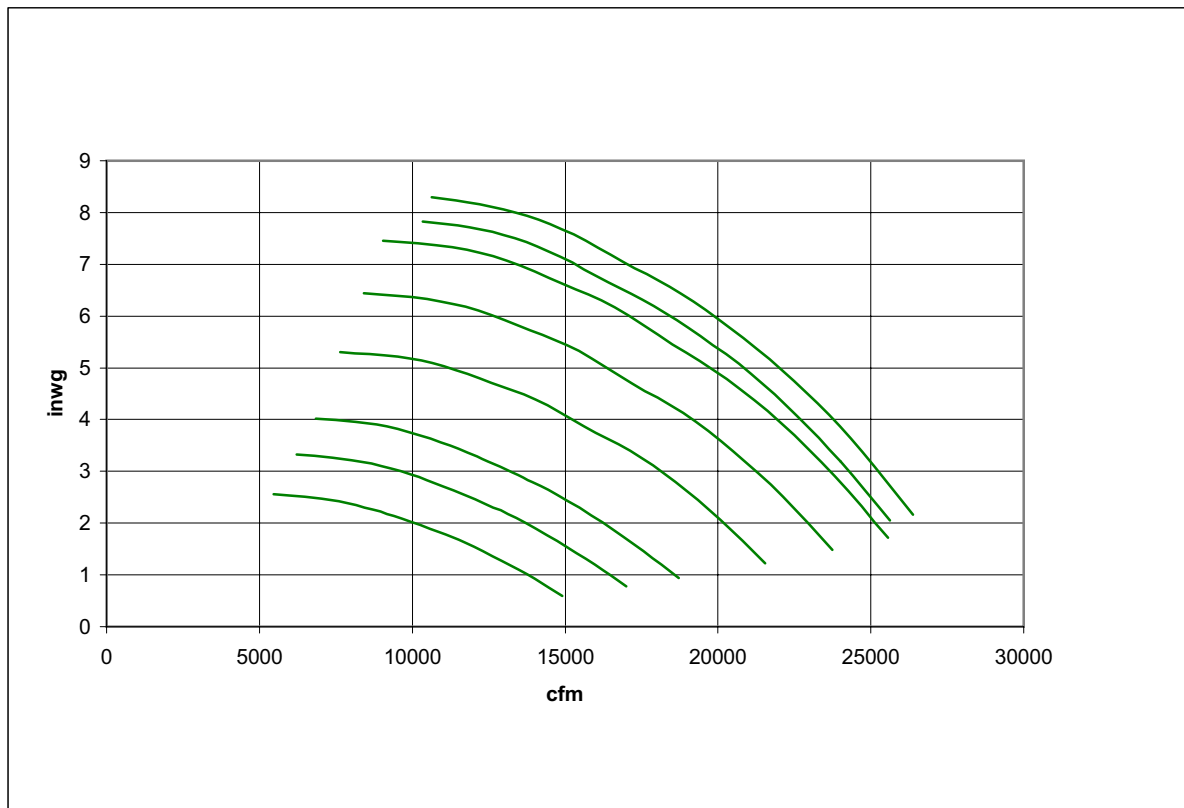
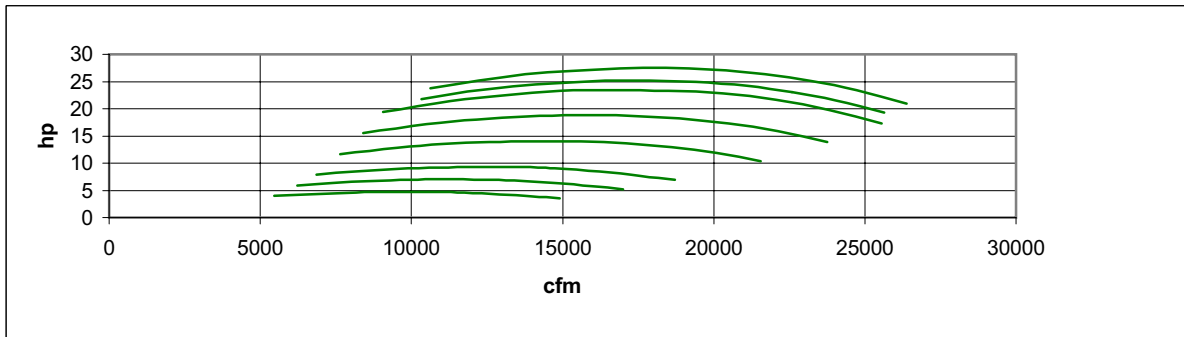
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
920	88	94	93	91	88	85	72	60	99	93	15%
920	86	93	92	89	83	78	69	60	97	90	50%
920	85	93	89	87	81	73	67	60	96	87	70%
920	84	91	86	84	78	72	67	62	93	85	88%
920	87	92	85	82	75	70	67	64	94	83	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
775	87	90	89	86	84	78	65	53	95	88	15%
775	85	89	88	84	79	72	63	54	93	85	50%
775	84	88	85	82	75	68	62	55	91	82	70%
775	83	86	82	79	73	67	62	57	89	80	88%
775	85	86	81	77	70	66	62	59	90	78	98%



Plenum Fan  
Fan Diameter

Air Performance Data  
900 mm



360frame option available

Optional Motor

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.

Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
1410	326T-6	30
1370	326T-6	30
1340	324T-6	25
1245	286T-6	20
1130	284T-6	15
985	256T-6	10
895	254T-6	7.5
785	215T-6	5



Plenum Fan Sound Performance Data  
 Fan Diameter 900 mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1410	95	104	105	103	98	96	94	84	110	104	25%
1410	99	105	104	102	97	92	88	81	109	103	50%
1410	99	105	104	102	97	92	88	81	109	103	75%
1410	109	110	101	98	94	89	85	81	113	100	85%
1410	103	107	102	99	93	90	87	82	110	100	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1370	95	104	104	102	97	95	93	83	109	104	25%
1370	99	105	103	101	96	91	87	80	109	102	50%
1370	99	105	103	101	96	91	87	80	109	102	75%
1370	109	109	100	97	93	88	84	80	112	100	85%
1370	103	107	101	98	92	89	86	81	110	100	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1340	96	105	103	101	97	96	90	83	109	103	25%
1340	99	104	102	101	96	91	85	80	109	102	50%
1340	96	101	99	99	94	88	83	80	106	100	75%
1340	103	105	99	96	92	87	84	81	108	98	85%
1340	98	104	101	98	92	88	85	81	107	99	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1245	95	105	101	99	95	94	88	81	108	102	25%
1245	98	103	100	99	94	89	83	78	107	100	50%
1245	95	100	97	97	92	86	81	78	104	98	75%
1245	102	103	97	95	89	85	82	79	107	96	85%
1245	97	103	99	96	90	86	83	79	106	97	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1130	93	104	98	97	92	92	85	78	106	99	25%
1130	96	102	97	97	91	86	80	75	105	98	50%
1130	93	99	94	95	89	83	78	75	102	95	75%
1130	100	101	94	92	86	82	79	76	105	94	85%
1130	95	102	96	93	87	83	80	76	104	95	98%

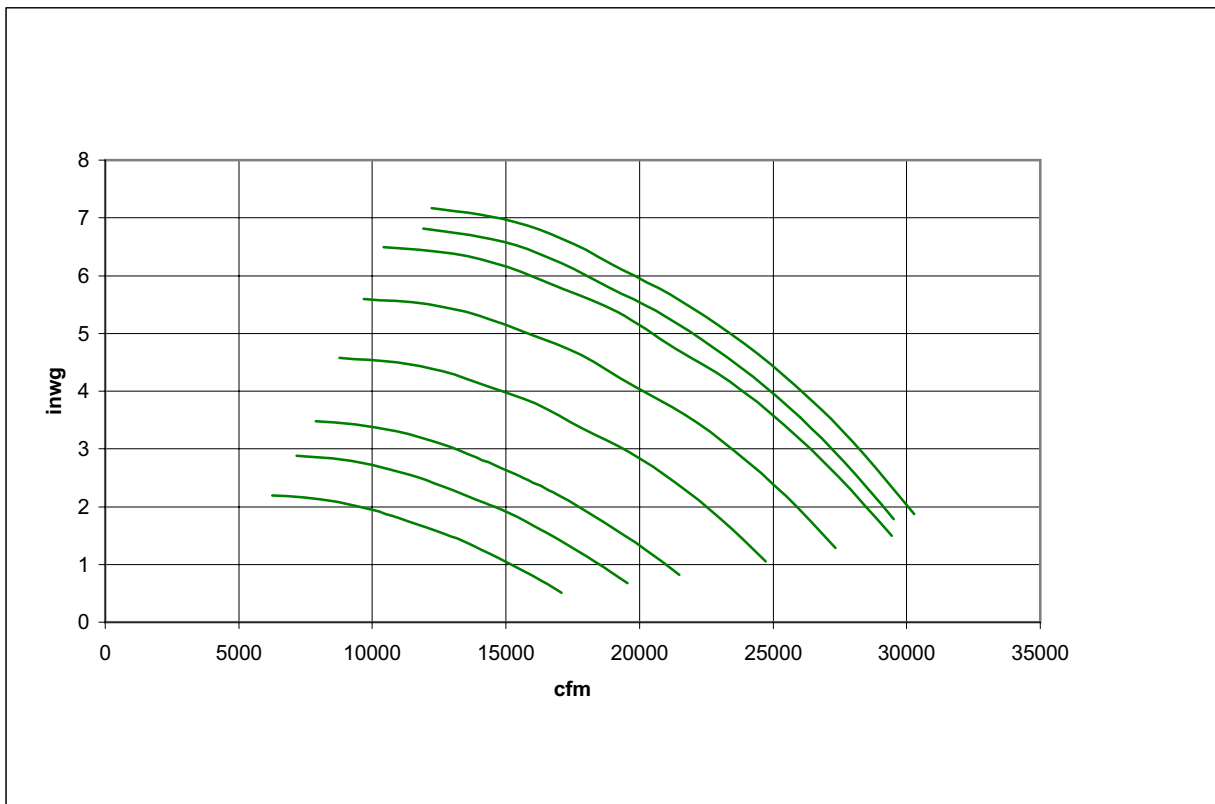
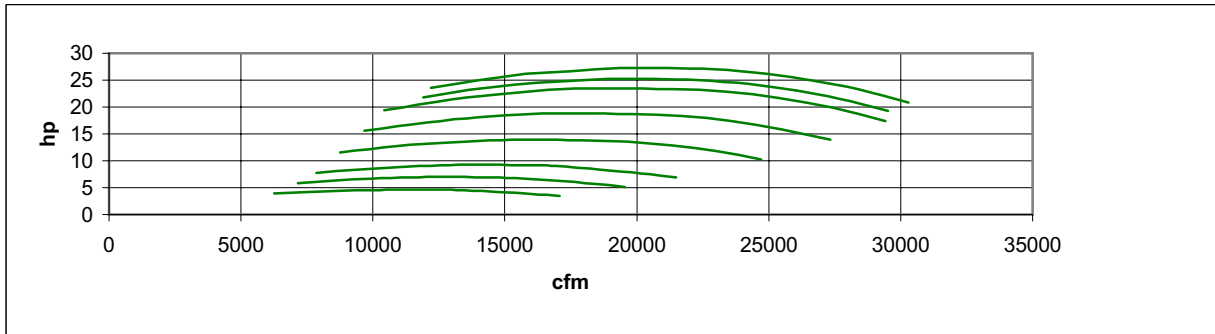
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
985	89	98	96	94	88	87	78	73	102	95	25%
985	88	97	95	93	87	82	76	73	101	93	50%
985	88	97	94	91	85	79	74	72	100	92	75%
985	95	102	95	88	82	79	75	73	104	92	85%
985	94	96	92	89	83	80	76	73	100	90	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
895	88	97	93	91	85	85	74	70	100	93	25%
895	87	96	92	90	83	79	72	70	99	91	50%
895	87	96	91	88	81	76	71	70	98	89	75%
895	94	101	91	85	79	76	72	70	103	89	85%
895	93	94	89	86	79	77	73	70	98	88	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
785	86	95	90	87	82	81	70	67	97	89	25%
785	85	94	89	86	80	75	69	67	96	87	50%
785	85	93	88	84	78	73	68	67	95	86	75%
785	92	98	87	81	76	73	69	67	99	86	85%
785	90	91	86	82	76	74	70	67	95	84	98%



Plenum Fan Air Performance Data  
 Fan Diameter 1000 mm



360 frame option available

**Optional Motor**

Air Performance Data tested in accordance with AMCA 210, type A installation. Performance tests were performed at AMCA or at an AMCA accredited Laboratory.

Power ratings do not include transmission losses.  
 Performance ratings do not include the effects of fitting accessories.

Noise Data – Outlet Sound Power levels, type A installation. Tested in Accordance with AMCA 300, scaled using AMCA 301

Recommended motors based on fan speeds indicated on the chart.

RPM	Motor Frame	Motor hp
1180	326T-6	30
1150	326T-6	30
1125	324T-6	25
1045	286T-6	20
945	284T-6	15
750	254T-6	7.5
655	215T-6	5





Plenum Fan                  Sound Performance Data  
 Fan Diameter                1000    mm

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1180	97	104	104	101	97	95	91	81	109	103	25%
1180	100	105	103	100	95	90	85	78	109	101	50%
1180	100	105	103	100	95	90	85	78	109	101	75%
1180	109	107	99	96	92	87	83	79	112	99	85%
1180	104	106	100	97	91	88	85	80	109	99	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1150	97	103	103	100	96	94	90	80	108	102	25%
1150	100	104	102	99	94	89	85	78	108	100	50%
1150	100	104	102	99	94	89	85	78	108	100	75%
1150	108	106	99	95	91	86	82	78	111	98	85%
1150	103	105	100	96	91	88	84	79	108	98	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1125	96	107	101	100	96	95	88	81	109	102	25%
1125	99	105	101	100	94	90	83	79	108	101	50%
1125	96	102	98	98	92	87	82	79	106	98	75%
1125	103	104	97	95	90	86	83	80	108	97	85%
1125	98	105	99	96	90	87	84	80	107	98	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
1045	96	105	99	98	94	93	85	78	108	100	25%
1045	98	103	99	98	91	87	80	76	107	99	50%
1045	95	100	96	96	89	84	80	77	104	96	75%
1045	102	102	95	93	87	84	81	78	106	95	85%
1045	97	103	97	94	88	85	81	77	105	96	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
945	95	102	97	96	92	90	82	75	105	98	25%
945	97	101	97	95	89	84	78	74	104	96	50%
945	94	98	94	93	86	81	77	74	101	93	75%
945	100	99	92	90	85	81	78	75	103	92	85%
945	96	100	94	91	85	82	79	75	103	93	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
825	90	99	94	92	86	86	74	71	102	94	25%
825	89	98	93	91	84	80	73	71	101	92	50%
825	89	98	92	89	82	77	72	71	100	90	75%
825	96	103	91	86	80	77	73	71	104	90	85%
825	95	95	90	87	80	78	74	71	99	89	98%

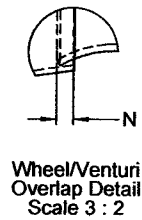
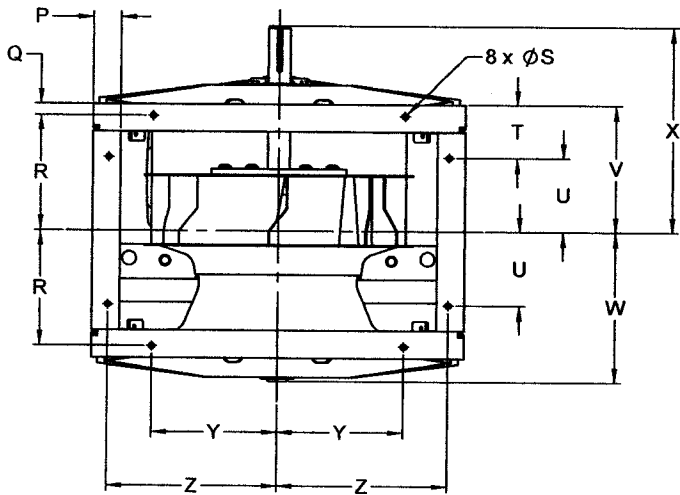
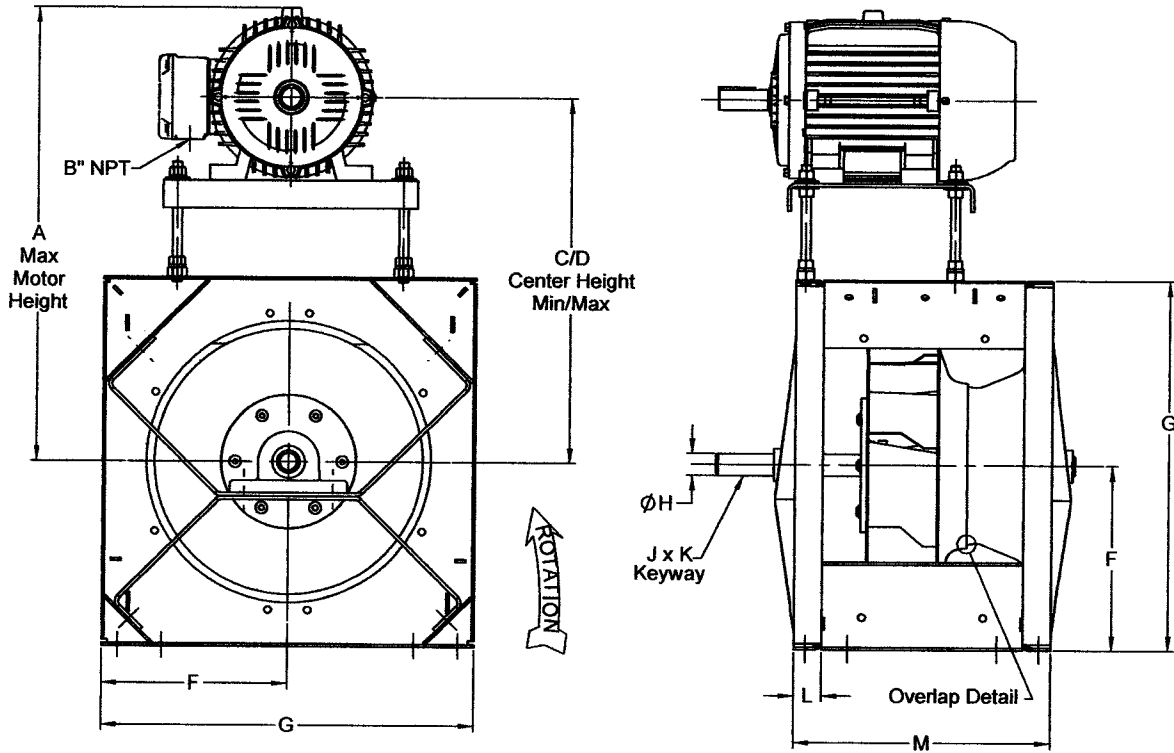
Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
750	89	96	92	89	84	82	72	69	99	91	25%
750	88	95	91	88	82	77	71	69	98	89	50%
750	88	95	90	86	79	74	70	69	97	87	75%
750	95	99	88	83	78	75	71	69	101	87	85%
750	93	92	88	84	78	76	72	69	97	86	98%

Speed	63	125	250	500	1000	2000	4000	8000	Lw	Lwa	% PS (peak)
655	88	93	89	85	81	77	68	65	96	87	25%
655	87	92	88	84	78	73	68	66	95	85	50%
655	87	91	86	82	76	71	67	66	94	83	75%
655	94	94	85	79	74	71	68	66	97	83	85%
655	90	89	84	80	75	72	68	65	93	82	98%



# Dimensions for **PL** fans Sizes 31 to 56

31PL Fan Shown with 180T Frame Motor



- NOTE:  
 1) CONTROL DOCUMENT AFC DRAWING PLD1105F  
 2) SEE SHEET 2 OF 2 FOR DIMENSION CHART AND WEIGHTS FOR FAN SIZES PL31 THRU PL56.  
 3) PL31 WITH A 180T MOTOR SHOWN

Dimensions for **PL** fans Sizes 31 to 56

Fan Assembly Data - Top & Side Views									
Fan Size	F	G	H	J	K	L	M	N	Weight Lbs/Kg
31	10	20	1 3/16	1/8	1/4	1 1/2	13 3/4	3/16	130# (59 Kg)
35	11	22	1 3/16	1/8	1/4	1 1/2	15 3/4	1/4	150# (68 Kg)
40	12	24	1 3/16	1/8	1/4	1 1/2	17	5/16	175# (80 Kg)
45	13	26	1 7/16	3/16	3/8	1 3/4	19	9/32	220# (100 Kg)
50	14 1/2	29	1 7/16	3/16	3/8	2 1/4	21 3/8	11/32	270# (123 Kg)
56	16	32	1 11/16	3/16	3/8	2 1/4	23	3/8	320# (145 Kg)

Fan Assembly Data - Bottom View											
Fan Size	P	Q	R	S	T	U	V	W	X	Y	Z
31	1 1/2	5/8	6 1/4	5/16	2 7/8	4	6 7/8	8 1/8	11 1/8	6 3/4	9 1/8
35	1 1/2	5/8	7 1/4	7/16	2 7/8	5	7 7/8	9 1/8	12 1/8	8 1/4	10 1/8
40	1 1/2	5/8	7 7/8	7/16	3	5 1/2	8 1/2	9 3/4	13 3/4	8 3/4	11 1/8
45	2 1/2	3/4	8 3/4	7/16	4 1/4	5 1/4	9 1/2	10 7/8	14 3/4	9 5/8	11 1/2
50	3	1	9 11/16	9/16	3 3/16	7 1/2	10 11/16	11 15/16	16 7/8	10 5/8	13
56	3	1	10 1/2	9/16	3 1/2	8	11 1/2	12 3/4	17 11/16	11 3/4	14 1/2

Belt Center Distances				
Fan Size	Frame	A	C - Min	D - Max
31	140T	22 3/8	15 3/4	18 3/4
	180T	24 5/8	16 3/4	19 3/4
35	140T	23 1/8	16 1/2	19 1/2
	180T	25 3/8	17 1/2	20 1/2
40	140T	24 1/8	17 1/2	20 1/2
	180T	26 3/8	18 1/2	21 1/2
	210T	27 7/8	19 1/4	22 1/4
45	140T	25 1/8	18 1/2	21 1/2
	180T	27 3/8	19 1/2	22 1/2
	210T	28 7/8	20 1/4	23 1/4
50	180T	29 1/2	21 3/4	24 3/4
	210T	31	22 1/2	25 1/2
	250T	32 5/8	23 1/2	26 1/2
56	180T	31	23 1/4	26 1/4
	210T	32 1/2	24	27
	250T	34 1/8	25	28

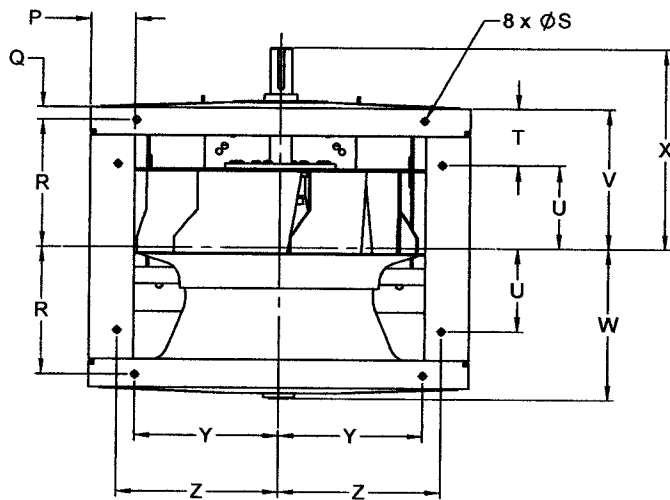
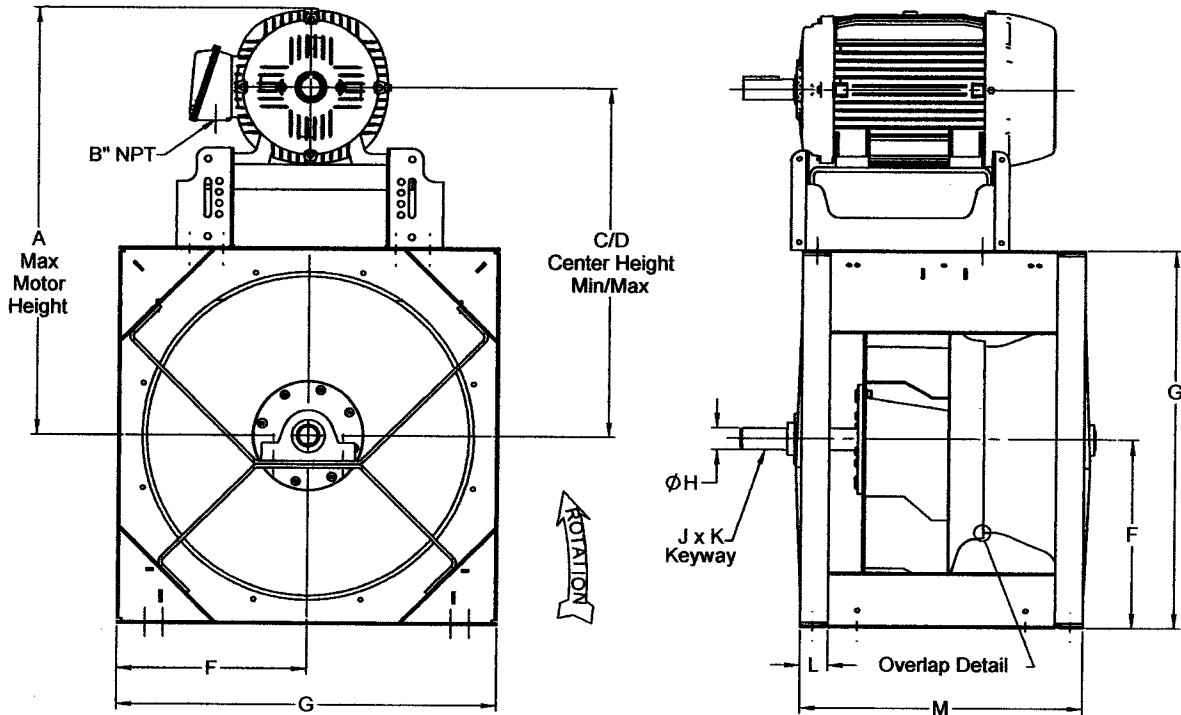
Motor Data		
Frame	B	Weight Lbs/Kg
140T	3/4	55# (25 Kg)
180T	3/4	100# (45 Kg)
210T	3/4	170# (77 Kg)
250T	1	290# (132 Kg)

Note:  
To Determine Total Approximate Fan Weight  
Add Fan Weight and Motor Weight From Both Charts

PL31 & PL35 Max Motor Frame: 180T  
PL40 & PL45 Max Motor Frame: 210T  
PL 50 & PL56 Max Motor Frame: 250T

# Dimensions for **PL** fans Sizes 63 to 125

63 PL Fan Shown with 280T Frame Motor



- NOTE:
- 1) CONTROL DOCUMENT AFC DRAWING PLD1106F
  - 2) SEE SHEET 2 OF 2 FOR DIMENSION CHART AND WEIGHTS FOR FAN SIZES PL63 THRU PL125.
  - 3) PL63 WITH A 280T MOTOR SHOWN

## Dimensions for **PL** fans Sizes 63 to 125

Fan Assembly Data - Top & Side Views									
Fan Size	F	G	H	J	K	L	M	N	Weight Lbs/Kg
63	17	34	1 15/16	1/4	1/2	2 1/2	25 1/4	3/8	485# (220 Kg)
71	19	38	1 15/16	1/4	1/2	2 1/2	27 1/4	15/32	555# (252 Kg)
80	21	42	1 15/16	1/4	1/2	3	30 1/2	1/2	640# (291 Kg)
90	25 1/2	51	2 3/16	1/4	1/2	3 1/2	36 5/8	5/8	930# (423 Kg)
100	28	56	2 3/16	1/4	1/2	3 1/2	39 1/2	21/32	1,210# (550 Kg)
112	31	62	2 7/16	5/16	5/8	4	43 5/8	23/32	1,640# (745 Kg)
125	34	68	2 11/16	5/16	5/8	4	47 1/8	3/4	2,125# (966 Kg)

Fan Assembly Data - Bottom View											
Fan Size	P	Q	R	S	T	U	V	W	X	Y	Z
63	4	1 1/8	11 1/2	9/16	5 1/8	7 1/2	12 5/8	13 5/8	18 1/16	12 7/8	14 1/2
71	4	1 1/8	12 1/2	9/16	5 5/8	8	13 5/8	14 7/8	19 1/16	14 1/8	16 1/2
80	4 3/4	1 3/8	13 7/8	9/16	6 1/4	9	15 1/4	15 1/2	21 3/16	15 7/8	17 1/2
90	4 3/4	1 5/8	16 11/16	9/16	6 5/16	12	18 5/16	18 13/16	24 3/4	18 7/8	22
100	4 3/4	1 5/8	18 1/8	13/16	6 1/4	13 1/2	19 3/4	20 1/4	26 3/16	20 7/8	24 1/2
112	6	1 7/8	19 15/16	13/16	6	15 13/16	21 13/16	22 9/16	28 3/4	22 7/8	26 1/2
125	6	1 7/8	21 11/16	13/16	6	17 9/16	23 9/16	24 5/16	30 1/2	25 3/8	29 1/2

Belt Center Distances			
Fan Size	Frame	A	D - Max
63	180T	33 7/8	29
	210T	35 3/8	29 3/4
	250T	37	30 3/4
	280T	38 5/8	31 1/2
71	210T	37 3/8	31 3/4
	250T	39	32 3/4
80	280T	40 5/8	33 1/2
	210T	39 3/8	33 3/4
	250T	41	34 3/4
90	280T	42 5/8	35 1/2
	250T	45 1/2	39 1/4
	280T	47 1/8	40
	320T	49	41
100	360T	51 1/2	42
	250T	48	41 3/4
	280T	49 5/8	42 1/2
	320T	51 1/2	43 1/2
112	360T	54	44 1/2
	250T	51	44 3/4
	280T	52 5/8	45 1/2
	320T	54 1/2	46 1/2
125	360T	57	47 1/2
	250T	54	47 3/4
	280T	55 5/8	48 1/2
	320T	57 1/2	49 1/2

Motor Data		
Frame	B	Weight Lbs/Kg
180T	3/4	100# (45 Kg)
210T	3/4	170# (77 Kg)
250T	1	290# (132 Kg)
280T	1 1/2	440# (200 Kg)
320T	2	620# (282 Kg)
360T	2 1/2	810# (368 Kg)

**Note:**

To Determine Total Approximate Fan Weight  
Add Fan Weight and Motor Weight From Both Charts

PL63 Min Motor Frame: 180T - Max Motor Frame: 280T  
PL71 & PL80 Min Motor Frame: 210T - Max Motor Frame: 280T  
PL90 Thru PL125 Min Motor Frame: 250T - Max Motor Frame: 360T

# Guide Specification

## PL Plenum Fans

Fans shall be PL Plenum fans, as manufactured by American Fan Company, Fairfield, Ohio. Fans shall be Arrangement 3 or 3T. The fan should be non-overloading and equipped with backward inclined blades. The fan's operating characteristics should be such that the pressure curve continues to rise beyond the peak efficiency to guarantee a stable and quiet fan. The fan impeller shall be center hung on a separate shaft and the bearings supported on struts attached to the fan frame.

**PERFORMANCE** – Fans shall be tested in accordance with AMCA 210 test code for air moving devices and shall be guaranteed by American Fan Company to deliver rated published performance levels within permitted tolerances. Fans shall be tested in an AMCA-approved laboratory for air and sound performance.

**CONSTRUCTION** – Fan frame, which is less a scroll housing, shall be constructed of 10-gauge ASTM A-1011 hot rolled steel in sizes 31 through 56 and 7-gauge hot rolled steel in sizes 63 through 1250. The frame joints shall be continuously welded and shaped so as to have a minimal effect on airflow within the fan frame.

**IMPELLER** – Impeller shall be made of fabricated steel, and the blades are welded to the back plate and shroud. The impeller shall be statically and dynamically balanced in accordance to AMCA standards. Blades shall be die formed steel, shaped with special FEA-designed blade-profile geometry to provide increased efficiency and pressure development.

**SHAFT** - Shafts shall be AISI 1045 cold drawn steel round shapes, accurately turned, ground, polished, and checked for accuracy and straightness. Shaft size shall be selected for the first critical speed of at least 1.25 times the maximum speed.

**BEARINGS** - Bearings shall be heavy duty, grease lubricated, anti-friction ball or spherical roller, self-aligning, pillow block type and selected for a

minimum average bearing life (AFBMA L-50) in excess of 800,000 hours at the maximum load. All bearings shall be provided with pre-filled factory. As an option, the bearings can be supplied with extended lubrication lines with grease fittings terminating at the fan's exterior.

**DRIVE** – Fans shall be equipped with a (fixed/adjustable) pitch V-belt drive selected to operate at the required RPM. The V-belt drive is to consist of cast iron sheaves and anti-static conducting belts. Drives shall be selected with a (1.3-1.5) service factor based upon the required motor horsepower of the fan.

**MOTOR** – Motors supplied with the fans shall be manufactured in accordance with current applicable standards of IEEE and NEMA and, where applicable, shall meet at least current EPACT standards for efficiency level. Motors shall be foot-mounted, NEMA standard (ODP, TEFC), continuous duty, ball bearing type with class (B or F) insulation and of cast iron construction when commercially available.

**FINISH** – The entire fan assembly, excluding the shaft and bearings shall be thoroughly cleaned before application of finish coat. Prior to assembly, all steel parts shall be primed and then painted with a finish coat of semi gloss alkyd enamel that shall be applied to a dry film thickness of 2.0 mils minimum and oven-dried. Enamel shall be mercury-, lead- and chromate-free.

**ACCESSORIES** – When specified, accessories shall be provided by American Fan Company to maintain one-source responsibility.

**FACTORY RUN TEST** – All fans with motors and drives mounted by American Fan Company shall be completely assembled and test run as a unit at the specified operating speed prior to shipment. Records shall be maintained and a written copy shall be available upon request for a minimum of seven (7) years. The fan shall be built under an ISO-9000 Quality System.



## Company History



### Main Plant and Offices

American Fan Company was founded in July 1969, for the initial purpose of furnishing cast aluminum blower to the US OEM Marketplace. The company thrived and moved to expanded quarters six times during its first ten years in business. In 1979, AFC moved to its main plant and offices to their current location.

Throughout its history American Fan Company has led the industry in innovation, adding digital controlled

machines in the 80's and being the first US-based fan company to become 100% CAD.

In 1986, Woods Air Movement of Colchester, UK acquired AFC. By 1987 AFC was producing the Woods line of Axial Fans in the US. The company's facilities grew again and soon included an airflow laboratory and auxiliary manufacturing facilities. In 1994, AFC became the first US fan company to receive ISO-certification. American Fan Company is now an operating unit of *FläktWoods*, the largest fan and air handling company in the world.





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**A Flakt Woods Company**

