

## Hison Axial Flow Fans

### Introduction

Hison Marine Axial Flow Fans, formerly know as Howden Fans are manufactured to international Quality Standard. Axial flow fans are available from sizes 305mm to 1800mm diameter, and incorporated with heavy duty marine grade impellers with aerofoil blades for better efficiencies and lower sound level.

### Performance

Ranges from 100m<sup>3</sup>/hr to 250000m<sup>3</sup>/hr and static pressure up to 125mmwg

### Construction

Fans for marine industries and offshore project are ruggedly constructed to withstand stringent and hostile environment.

Explosion proof motors and spark Resistance Construction Fans are available on requirement. Spark Resistant Construction Fans are built in accordance to AMCA standard 99-0401-86, Type B Constructions.

Anti-Spark Ring on standard fans is available on request.

### Testing

Performance of fans are tested in accordance to AMCA Publication 211 and comply with the requirement of the AMCA Certified Ratings Program.

Sound ratings shown are based on tests and procedures in accordance with AMCA Standard 300 and 301

### Direction of Airflow

Versatility of airflow direction of form 'B' or form 'A'

### Typical Applications

- Air Conditioning
- Building Ventilation
- Marine Industries
- Offshore Projects
- Oven Exhaust
- Spray Booth Exhaust
- Cooling
- Kitchen Exhaust, etc....

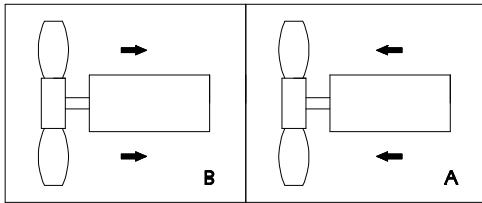


Airtrade System certifies that the Hison Axial Flow Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

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### Direction of Airflow

Versatility of airflow direction of form 'B' or form 'A'



### Surface Coating

- Hot Dipped Galvanized to EN ISO 461:1999 which also comply to ASTM A123, A153 and BS 729.
- Blasted to SA 2-1/2 and coated with Hi-Built epoxy paint for marine environment and most industries applications.
- Special painting to user specification is available upon request.

### Impeller

Adjustable Blades angles design to meet varied volume and pressure system requirements featuring the blade shank with tapered conical section. The tapered section fits into a conical slot in the hub, providing a taper lock fit. A bolt is cast into the blade, projecting into the hub and is secured on the inside by lock-washer and nut.



### Balancing Standard

All fan impellers are statically and dynamically balanced to ISO 1940-1973 (E) G: 6.3 standards.

### Motors

All Fans shall be supplied with totally enclosed, high efficiency motors of IP 55 degree of protection, foot-mounted Class F insulation, built to International Standard (IEC)

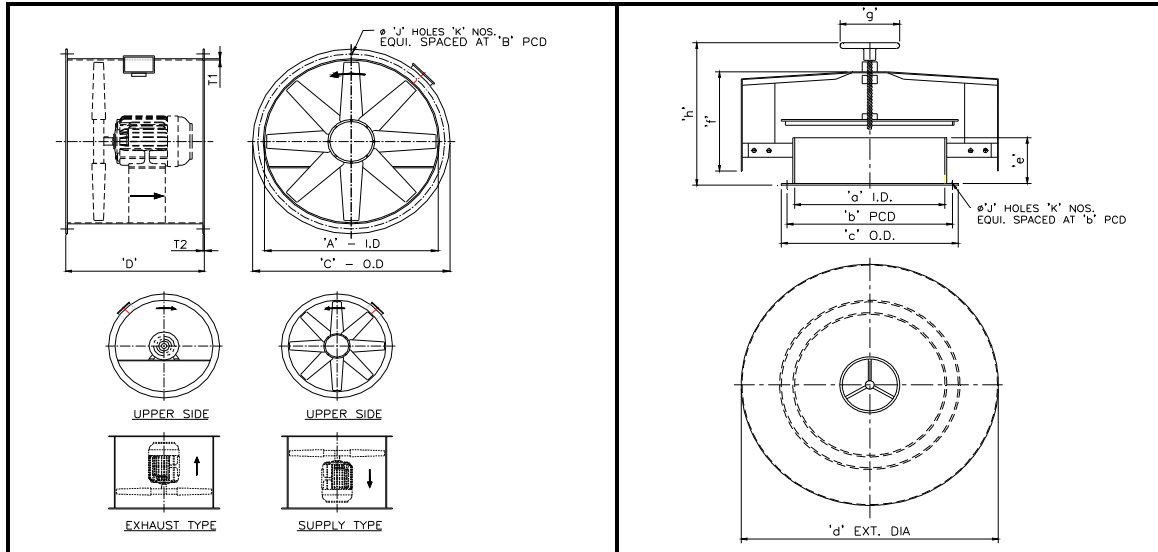
Special motors such as Explosion Proof, 2 speeds, Class H or D.C. motors are available to suit each specific application.

### Accessories

- Separate upstream and downstream guide vanes
- Inlet/Outlet Silencers
- Mounting Feet
- Inlet Cones
- Matching Flange
- Mushroom Ventilators
- Control Damper
- Wire Guards
- Anti-Vibration Mountings

\* Fan silencers are recommended for sound level exceeding 80dBA at 3m distance.

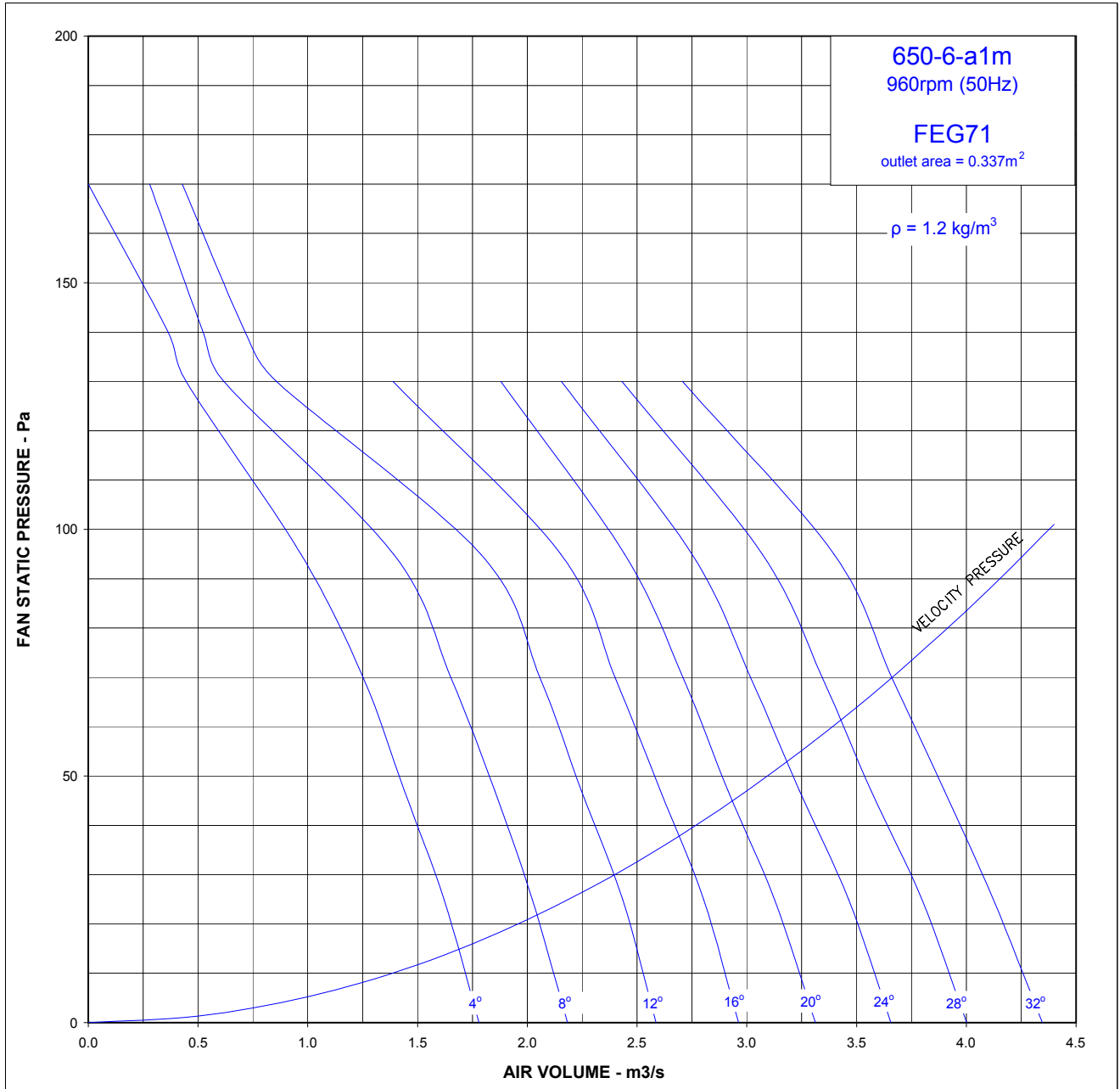
### Hison Axial Flow Fans



FAN DIMENSIONS						FLANGE DETAIL		COWLING DIMENSIONS								
FAN MODEL	THICKNESS		A	B	C	D (MAX)	J' MAX	K' NOS	a	b	c	d	e	f	g	h
	T1	T2														
200	3	6	205	248	286	305	12	6	205	248	286	405	115	200	150	325
	6			254	292					254	292					
250	3	6	254	298	336	305	12	6	254	298	336	455	115	200	150	325
	6			305	343					305	343					
300	3	6	305	350	388	356	12	8	305	350	388	560	115	200	150	325
	6			356	394					356	394					
350	3	6	355	400	438	415	12	8	355	400	438	660	115	254	200	380
	6			406	444					406	444					
400	3	6	405	450	488	500	12	8	405	450	488	710	140	305	200	455
	6			456	494					456	494					
450	3	6	455	500	538	600	14	8	455	500	538	812	140	356	200	500
	6			506	544					506	544					
500	3	6	505	550	588	750	14	8	505	550	588	864	150	356	200	510
	6			556	594					556	594					
550	3	6	555	600	638	800	14	8	555	600	638	915	150	356	250	535
	6			606	644					606	644					
600	3	6	605	662	712	850	14	12	605	662	712	965	150	356	250	535
	6			668	718					668	718					
650	3	6	655	712	762	850	14	12	655	712	762	1016	150	356	250	535
	6			718	768					718	768					
700	3	6	705	762	812	850	14	12	705	762	812	1118	150	400	250	580
	6			768	818					768	818					
750	3	6	755	812	862	850	14	12	755	812	862	1220	150	455	250	635
	6			818	868					818	868					
800	3	6	805	862	912	850	14	12	805	862	912	1220	150	455	250	635
	6			868	918					868	918					
900	4.5	6	905	977	1040	915	18	16	905	977	1040	1524	200	560	560	760
	6			980	1043					980	1043					
	9			987	1050					987	1050					
1000	4.5	6	1005	1077	1140	1065	18	16	1005	1077	1140	1625	200	560	560	760
	6			1080	1143					1080	1143					
	9			1087	1150					1087	1150					
1200	4.5	6	1205	1290	1366	1220	18	20	1205	1290	1366	2032	250	610	560	865
	6			1293	1369					1293	1369					
	9			1300	1376					1300	1376					
1250	4.5	6	1255	1340	1416	1220	18	20	1255	1340	1416	2135	250	610	560	865
	6			1343	1419					1343	1419					
	9			1350	1426					1350	1426					
1400	6	9	1405	1493	1569	1350	20	20	1405	1493	1569	2500	300	915	762	1185
	9			1500	1576					1500	1576					
1500	6	9	1505	1593	1669	1400	20	20	1505	1593	1669	2600	300	950	762	1220
	9			1600	1676					1600	1676					
1600	6	9	1605	1693	1769	1500	20	20	1605	1693	1769	2800	300	1000	762	1270
	9			1700	1776					1700	1776					
1800	6	9	1805	1893	1969	1600	20	20	1805	1893	1969	3000	350	1200	762	1470
	9			1900	1976					1900	1976					

**Note:**

- 1) The dimensions quoted in this publication are generally correct, but should be checked at the time of ordering. Hison reserves the right to change design and specifications without notice.
- 2) All dimensions in mm.
- 3) Inspection doors are standard for 800mm dia fan and above.
- 4) Certified dimensions and weights can be furnished after receipt of order.

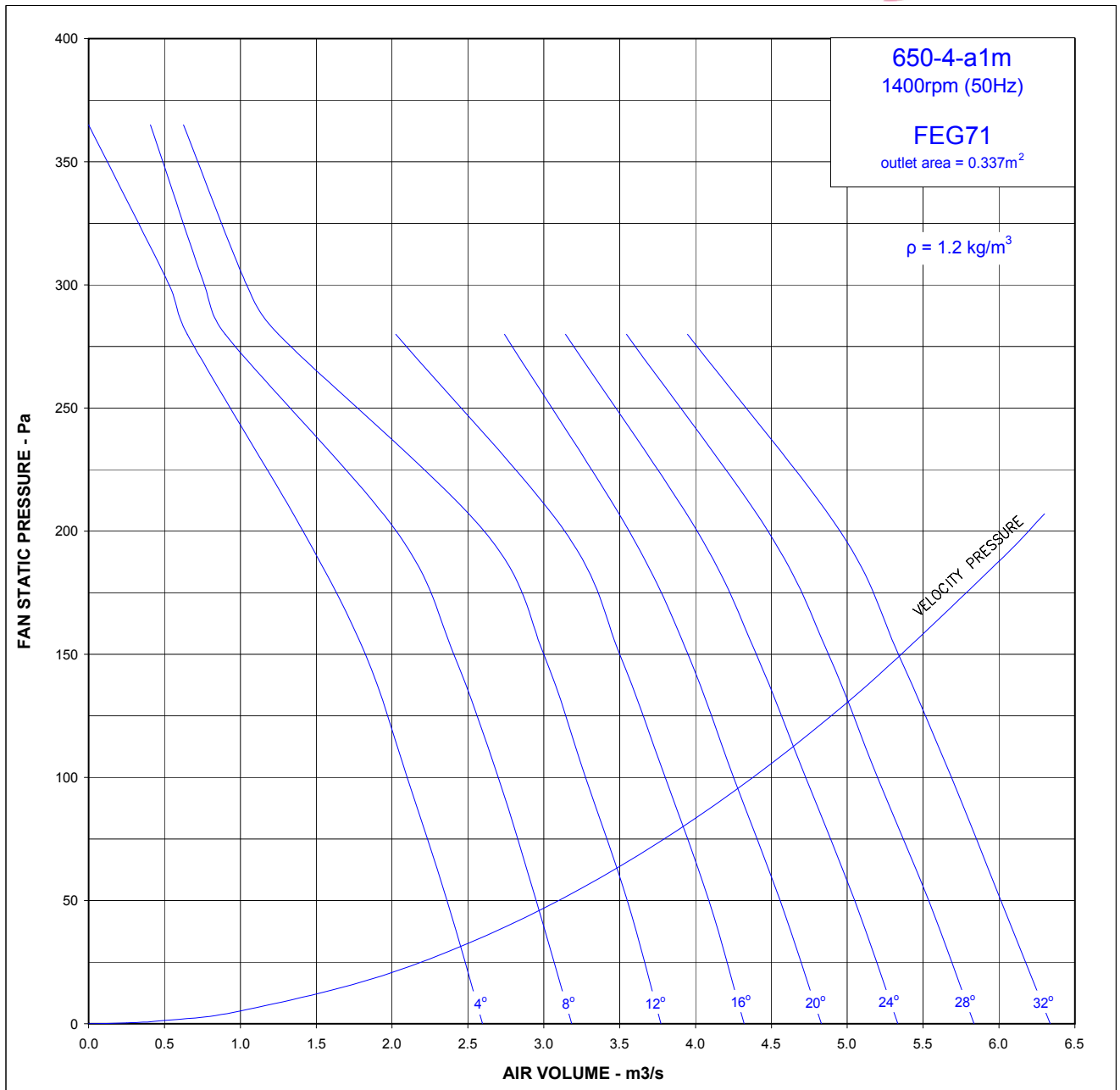


PITCH ANGLE	PERFORMANCE m <sup>3</sup> /s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	25	47	70	95	130	140	170			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	1.78	1.62	1.44	1.25	0.97	0.45	0.36	0.00	0.17	62	69	65	72	75	70	62	53	44	78	54
8°	2.18	2.02	1.85	1.65	1.39	0.62	0.52	0.28	0.28	61	70	66	72	74	69	62	53	45	78	53
12°	2.59	2.43	2.25	2.06	1.79	0.86	0.71	0.43	0.37	65	71	67	72	72	67	61	54	46	77	52
16°	2.96	2.80	2.61	2.40	2.15	1.39	-	-	0.41	66	72	68	72	71	66	60	54	47	77	51
20°	3.31	3.13	2.91	2.71	2.44	1.88	-	-	0.47	66	73	69	72	70	65	60	54	48	78	50
24°	3.66	3.46	3.24	3.02	2.75	2.15	-	-	0.59	63	75	70	72	71	66	61	56	51	79	51
28°	4.00	3.80	3.57	3.34	3.07	2.430	-	-	0.71	62	76	70	73	73	67	62	58	54	80	53
32°	4.35	4.12	3.90	3.66	3.40	2.706	-	-	0.84	63	77	71	74	74	68	63	59	56	81	54



Airtrade System certifies that the model 650-X-a1m shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

\*Performance certified is for installation type D - Ducted inlet, Ducted outlet  
 \*Performance ratings do not include the effects of appurtenances (accessories)  
 \*The AMCA Certified Ratings Seal applies to air performance and the Fan Efficiency Grade ratings only.  
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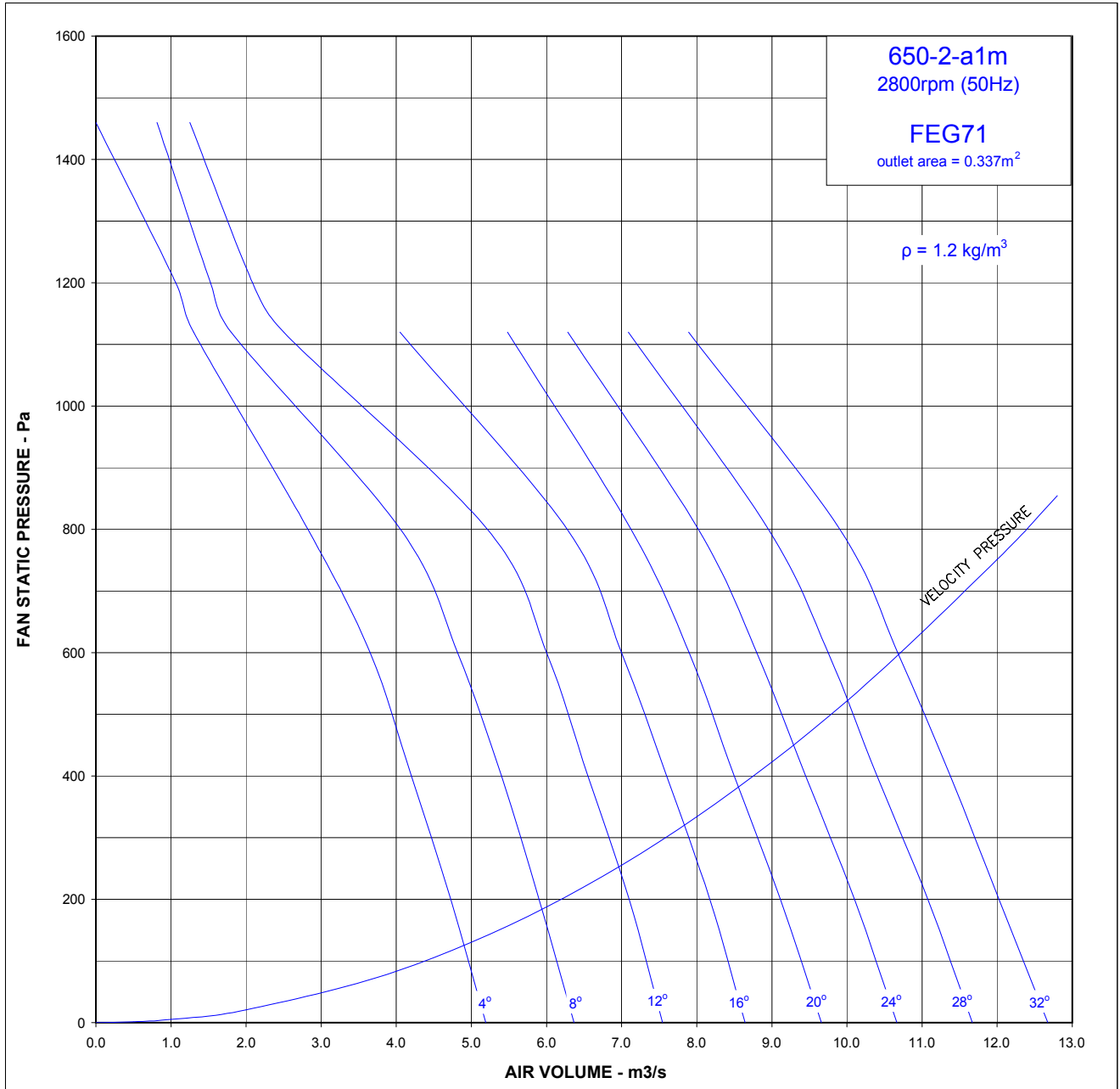


PITCH ANGLE	PERFORMANCE m <sup>3</sup> /s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	50	100	150	200	280	300	365			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	2.60	2.36	2.10	1.83	1.41	0.65	0.53	0.00	0.54	62	79	76	75	84	82	75	66	57	88	65
8°	3.18	2.95	2.70	2.41	2.03	0.90	0.76	0.41	0.88	61	80	77	76	82	81	74	66	58	87	64
12°	3.77	3.55	3.28	3.00	2.61	1.25	1.04	0.63	1.15	65	82	78	77	82	79	73	66	58	87	62
16°	4.32	4.09	3.80	3.50	3.14	2.02	-	-	1.27	66	84	78	78	81	77	72	66	59	88	61
20°	4.83	4.56	4.25	3.95	3.56	2.74	-	-	1.46	66	85	79	79	80	76	71	66	50	88	60
24°	5.33	5.05	4.73	4.40	4.01	3.14	-	-	1.83	63	86	80	79	81	77	71	67	62	89	62
28°	5.84	5.54	5.20	4.88	4.48	3.54	-	-	2.21	62	87	82	79	82	79	72	68	64	90	63
32°	6.34	6.01	5.69	5.34	4.95	3.95	-	-	2.59	63	87	83	80	83	81	73	69	66	91	64



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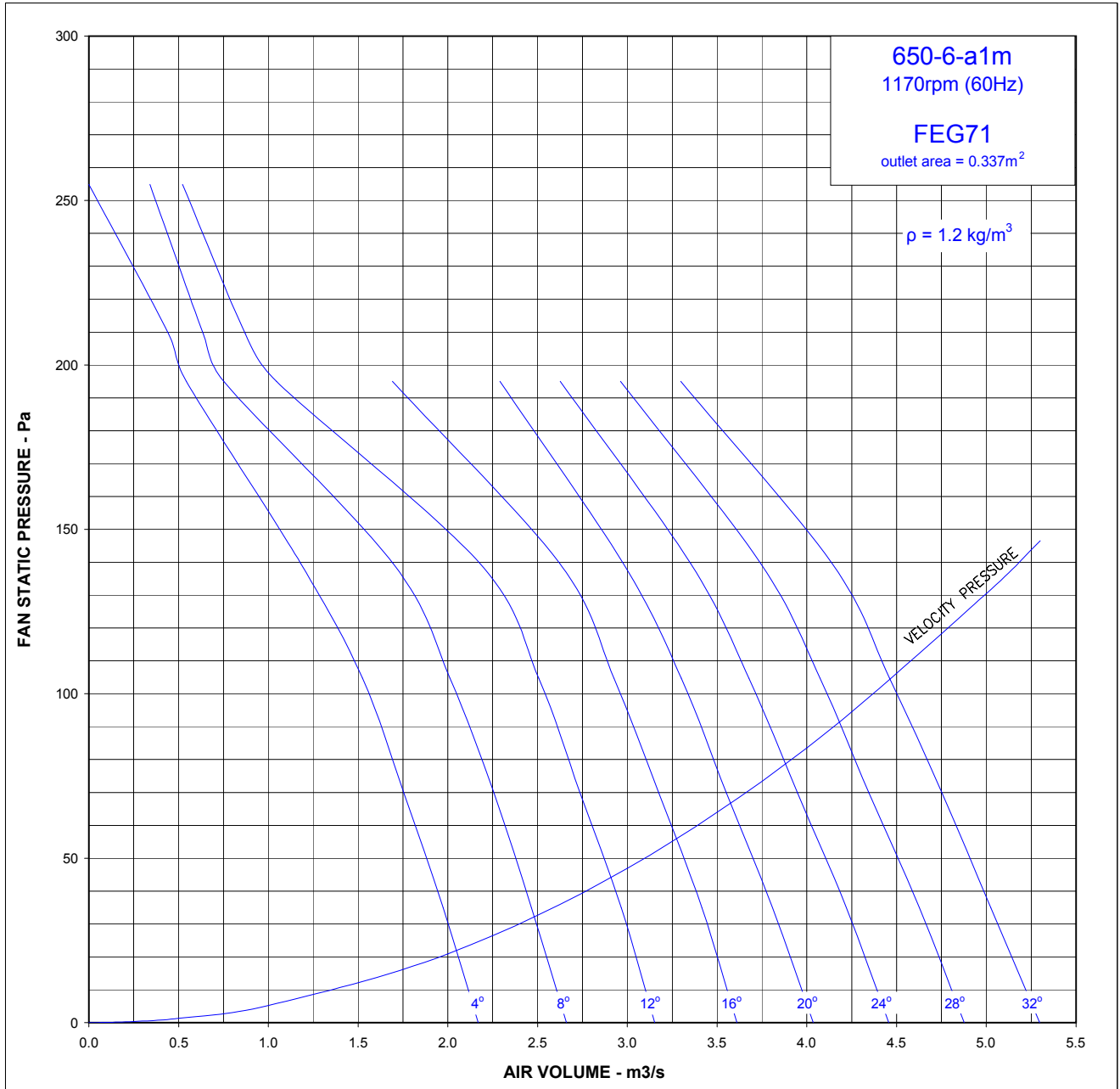


PITCH ANGLE	PERFORMANCE m3/s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	200	400	600	800	1120	1200	1460			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	5.19	4.73	4.20	3.65	2.83	1.30	1.06	0.00	4.31	62	91	94	91	90	99	97	90	81	103	82
8°	6.37	5.90	5.40	4.82	4.06	1.80	1.53	0.82	7.00	61	92	95	92	91	98	96	89	81	103	81
12°	7.54	7.10	6.55	6.00	5.21	2.50	2.09	1.25	9.17	65	94	97	93	92	97	94	88	81	103	80
16°	8.64	8.18	7.60	7.00	6.28	4.05	-	-	10.14	66	96	96	93	93	96	92	87	81	103	79
20°	9.66	9.12	8.50	7.90	7.13	5.48	-	-	11.72	66	97	100	94	94	95	91	86	81	104	78
24°	10.67	10.10	9.45	8.80	8.02	6.28	-	-	14.61	63	98	101	95	94	96	92	86	82	105	79
28°	11.67	11.08	10.40	9.75	8.95	7.09	-	-	17.68	62	99	102	97	95	97	94	87	83	106	80
32°	12.68	12.03	11.38	10.68	9.91	7.89	-	-	20.76	63	99	103	98	95	98	96	88	84	107	81



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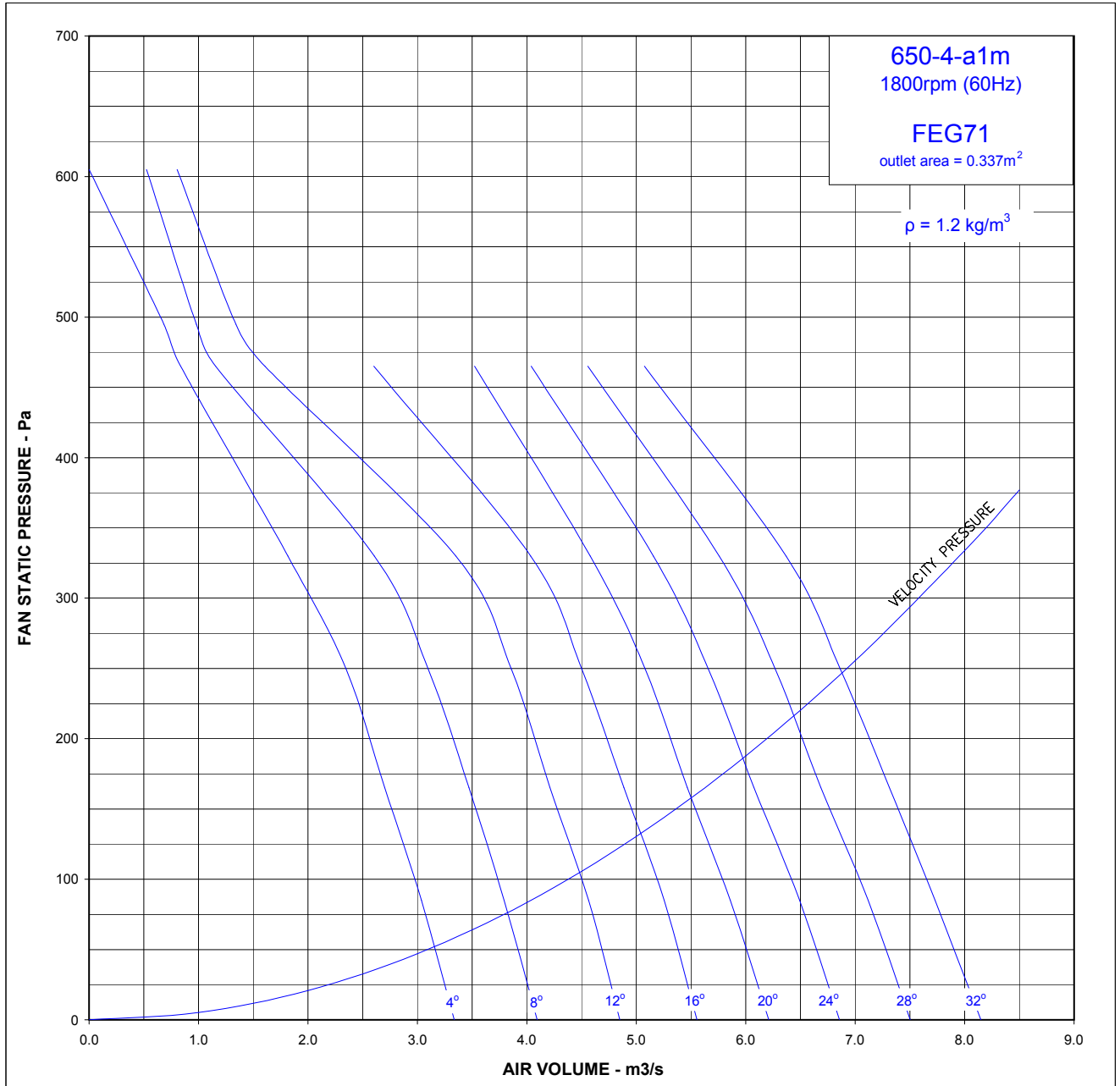


PITCH ANGLE	PERFORMANCE m <sup>3</sup> /s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	35	70	105	140	195	210	255			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	2.17	1.97	1.76	1.53	1.18	0.54	0.44	0.00	0.31	62	74	71	73	80	77	69	60	51	83	60
8°	2.66	2.47	2.26	2.01	1.69	0.75	0.64	0.34	0.51	61	76	72	74	79	75	68	60	52	83	59
12°	3.15	2.97	2.74	2.51	2.18	1.04	0.87	0.52	0.67	65	77	73	74	77	73	67	60	53	82	57
16°	3.61	3.42	3.18	2.93	2.62	1.69	-	-	0.74	66	78	74	75	76	72	66	60	53	83	56
20°	4.04	3.81	3.55	3.30	2.98	2.29	-	-	0.86	66	80	74	75	75	70	65	60	54	83	55
24°	4.46	4.22	3.95	3.68	3.35	2.63	-	-	1.07	63	81	75	76	76	72	66	62	57	84	57
28°	4.88	4.63	4.35	4.07	3.74	2.96	-	-	1.29	62	82	76	76	78	73	67	63	59	85	58
32°	5.30	5.02	4.75	4.46	4.14	3.30	-	-	1.51	63	82	77	77	79	75	68	65	62	86	59



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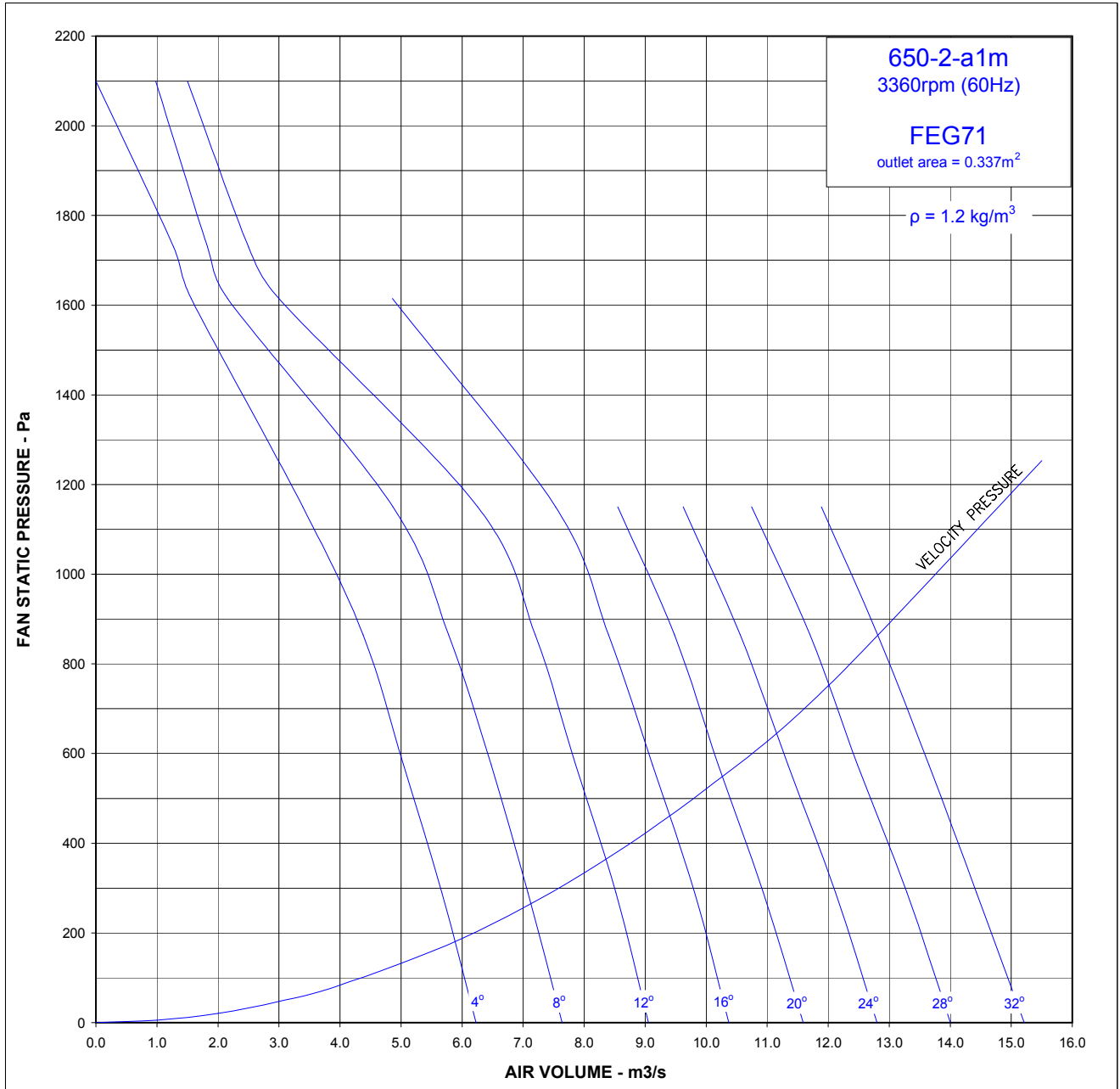
PITCH ANGLE	PERFORMANCE m3/s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	85	165	250	330	465	495	605			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	3.34	3.04	2.70	2.35	1.82	0.84	0.68	0.00	1.15	62	83	83	79	86	88	83	75	66	92	70
8°	4.09	3.79	3.47	3.10	2.61	1.16	0.98	0.52	1.86	61	85	84	80	86	87	82	74	66	92	69
12°	4.85	4.56	4.21	3.86	3.35	1.61	1.34	0.80	2.44	65	86	85	81	86	86	81	74	67	93	68
16°	5.56	5.26	4.89	4.50	4.03	2.60	-	-	2.69	66	88	86	82	85	84	79	73	67	93	67
20°	6.21	5.86	5.46	5.08	4.58	3.52	-	-	3.12	66	90	87	83	85	83	78	73	67	94	66
24°	6.86	6.49	6.08	5.66	5.16	4.04	-	-	3.88	63	90	88	83	86	84	79	74	69	94	68
28°	7.50	7.12	6.69	6.27	5.76	4.56	-	-	4.70	62	91	89	84	87	86	80	75	71	95	69
32°	8.15	7.73	7.31	6.86	6.37	5.07	-	-	5.52	63	92	90	84	88	87	81	76	73	96	70



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PITCH ANGLE	PERFORMANCE m3/s @ STATIC Pa								Max kW	TOTAL EFF. (%)	SOUND POWER DATA (dB)									
	0	290	575	865	1150	1615	1730	2100			63Hz	125Hz	250Hz	500Hz	1.0KHz	2.0KHz	4.0KHz	8.0KHz	Overall Sound Power Level (Lw)	Sound Pressure Level @3m Q1 Directivity (dBA)
4°	6.23	5.67	5.04	4.38	3.39	1.56	1.27	0.00	7.5	62	94	97	96	93	100	102	96	88	106	85
8°	7.64	7.08	6.48	5.78	4.87	2.16	1.83	0.98	12.1	61	96	99	97	94	100	100	95	87	106	84
12°	9.05	8.52	7.86	7.20	6.26	3.00	2.50	1.50	15.8	65	97	100	98	95	100	99	94	87	107	83
16°	10.37	9.81	9.12	8.40	7.53	4.86	-	-	17.5	66	99	102	99	96	99	97	92	86	107	83
20°	11.59	10.94	10.20	9.48	8.55	6.58	-	-	20.2	66	100	103	99	97	99	96	91	86	108	82
24°	12.80	12.12	11.34	10.56	9.63	7.54	-	-	25.2	63	101	104	101	97	100	97	92	87	109	83
28°	14.00	13.29	12.48	11.70	10.75	8.51	-	-	30.6	62	102	105	102	98	101	99	93	88	110	84
32°	15.21	14.43	13.65	12.81	11.89	9.47	-	-	35.9	63	103	106	103	98	101	101	94	89	111	85



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