



THE G. C. BROACH COMPANY - 7667 EAST 46 PLACE - TULSA, OK 74145-6364
TELEPHONE: 918-664-7420 TELEFAX: 918-627-4083

IN STOCK

READY FOR IMMEDIATE DELIVERY

FOUR IAP, INC. B-542 EXTRA HEAVY DUTY FANS

DESCRIBED AS FOLLOWS:

-
- Quantity:** Four - 2 CCW + 2 CW
 - Item:** Induced Draft Fan
 - Duty:** 60.61 #/Sec (77,375 ACFM) @ 7.26" SP @ 280°F @ 2500 Ft.
 - Selection:** IAP, Inc. Model B-542, Extra Heavy Duty, Premium Efficiency Arr't 8. 130 BHP @ Conditions described in "Duty" above.
 - Accessories:** Door, Flanged Inlet & Outlet, Drain, Shaft Seal, Heat Slinger, Drive Guards, Split Housing, Falk Type 110T Coupling, Inlet Vane Damper w/Pneumatic Actuator/Positioner/End Switches, Mfg. Std. High Temp. Aluminum Paint, and Mounted Motor.
 - Motor:** Horsepower: 150 Severe Duty, Premium Efficiency
RPM: 1200
Voltage: 460-3-60 Frame: 445T S.F. 1.15
Motor and Drive Mounted by: IAP, Inc.
Enclosure: TEFC
 - Bearings:** Heavy Duty
 - Shipping Wt:** 7,500 Lbs.
 - Note:** Closed Damper Cold Start Required.

These Induced Draft Fans are based on the following design conditions:

Max. Design Temperature of Fan, Deg. F	-----	600 - 800
Max. I.V.D. Design Temperature, Deg. F	-----	600
Fan Blower: Size	---- 542	Type ---- B
	Class --- EHD	Arrangement --- 8
	Dis. Position - TAU	SWSI

Tested Fan Performance:

ACFM	-----	81,114
S.P. (In. W.G.)	-----	7.9
Performance, RPM	-----	1180
BHP	-----	140
Density (Lb/Sq.Ft.)	-----	.047
Temperature, Deg. F	-----	280

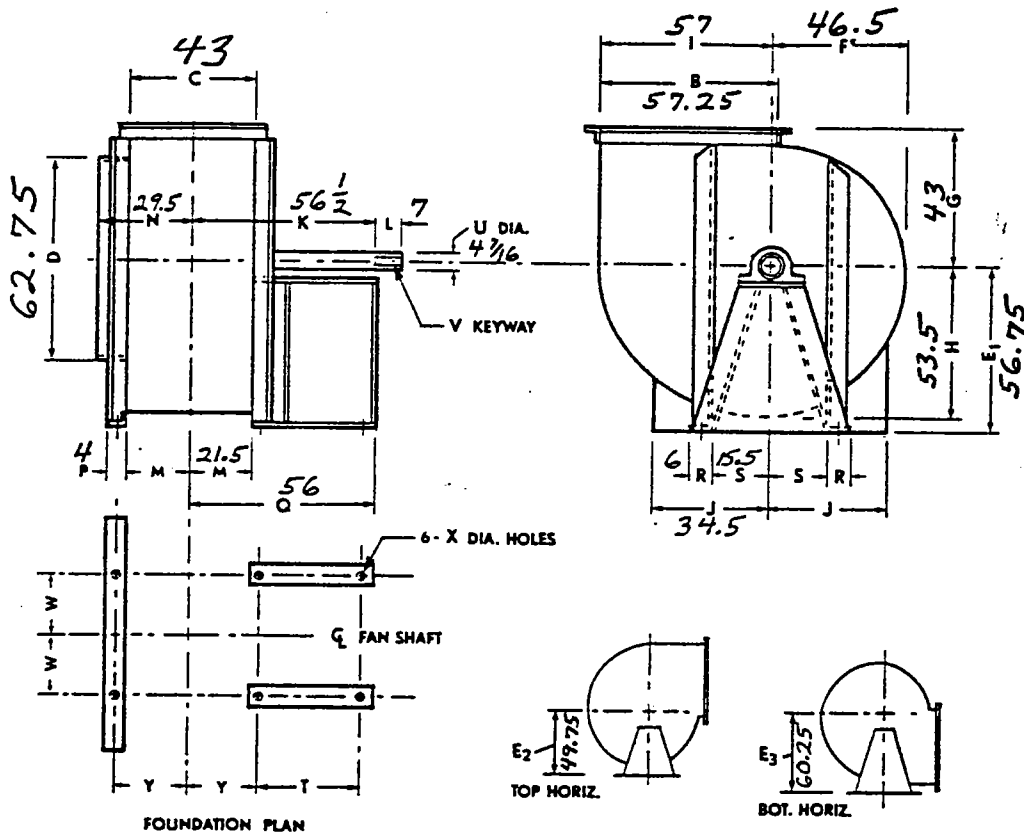
BI-542

EXTRA HEAVY DUTY INDUSTRIAL FANS

**DIMENSIONS
TYPE B
NON-OVERLOAD
WHEEL**



**STATIC PRESSURE
13" thru 24"**



Type AB-X

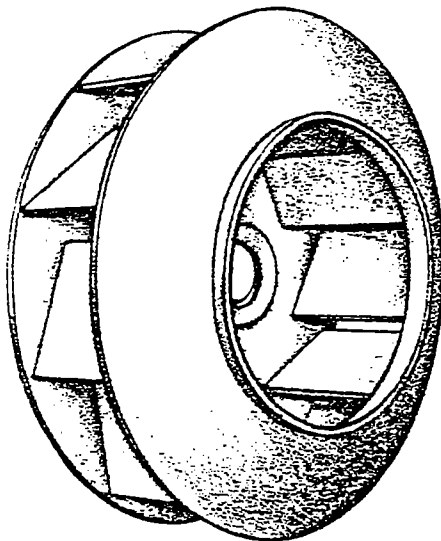
DIMENSIONS

FAN SIZE	B	C	D	E ₁	E ₂	E ₃	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y
182	19 1/4	14 1/4	24	20 1/4	17 1/4	21 1/2	15 1/4	15 1/4	18 1/4	19 1/4	14	24	3	7 1/4	11 1/4	3	23 1/4	3	8	13 1/4	1 1/4	1 1/4	9 1/4	1/4	8 1/4
200	21 1/4	16	27	21 1/4	19	23	16 1/4	16 1/4	19 1/4	21	15 1/2	26 1/4	4	8	12 1/4	3	26	3	9	15 1/4	1 1/4	1 1/4	10 1/2	1/4	9 1/4
222	23 1/4	17 1/4	29	24	21	25 1/2	18 1/4	18 1/2	21 1/4	23 1/4	16 1/2	27 1/4	4	8 1/4	13 1/4	3	26 1/4	3	9	15 1/4	1 1/4	1 1/4	10 1/2	1/4	10 1/4
245	26	19 1/2	32	26 1/4	23	27 1/4	21	20	24 1/4	25 1/4	18	28	4	9 1/4	14 1/4	3	27 1/4	3	9	15 1/4	2 1/4	1 1/4	10 1/2	1/4	11
270	28 1/4	21 1/4	34	29	25 1/2	30 1/4	23 1/2	22	27	28 1/4	19	29	4	10 1/4	15 1/4	3	28 1/4	3	10	15 1/4	2 1/4	1 1/4	11 1/2	1/4	12
300	31 1/4	23 1/4	37	31 1/4	27 1/4	33 1/4	25 1/4	25	29 1/4	31 1/4	21 1/2	30 1/4	4	11 1/4	16 1/4	3	30 1/4	3 1/2	10	15 1/4	2 1/4	1 1/4	11 1/2	1/4	13 1/2
330	34 1/4	26 1/4	40 1/2	34 1/2	30	36 1/4	28	26 1/2	32 1/2	34 1/4	23 1/4	35 1/2	5	13 1/4	17 1/4	3	35 1/4	3 1/2	10	18	2 1/4	1 1/4	11 1/2	1/4	14 1/2
365	38 1/4	29	43 1/4	38	33	40 1/4	31	29 1/4	36	38 1/4	24 1/4	39	5	14 1/2	19	3	38 1/2	3 1/2	12	20	3 1/4	1 1/4	13 1/4	1/4	16 1/4
402	42 1/4	31 1/4	48	42 1/4	37	45 1/4	34	31 1/4	39 1/2	42 1/4	27	45 1/4	5	15 1/4	21 1/4	4	45 1/4	4	12	25	3 1/4	1 1/4	14 1/2	1/4	18 1/2
445	47	35 1/4	52 1/2	47	41 1/4	50	38 1/4	35	43 1/4	46 1/4	29 1/4	48 1/4	6	17 1/4	25 1/4	4	48 1/4	6	13	25	3 1/4	1 1/4	17 1/2	1/4	20 1/4
490	51 1/4	38 1/4	57	51 1/4	44 1/4	54 1/4	41 1/4	38 1/2	48 1/4	51 1/4	31 1/4	50 1/2	6	19 1/4	27 1/4	4	50	6	13	26 1/2	3 1/4	1 1/4	17 1/2	1/4	22
542	57 1/4	43	62 1/4	56 1/4	49 1/4	60 1/4	46 1/4	43	53 1/2	57	34 1/2	56 1/2	7	21 1/2	29 1/4	4	56	6	15 1/2	30	4 1/4	1 1/4	20	1/4	24
600	63 1/4	47 1/2	68 1/2	62 1/2	55 1/4	67 1/2	51 1/2	49	59 1/4	63 1/4	38 1/4	71 1/4	7	23 1/4	31 1/4	6	71 1/4	6	19 1/2	42	4 1/4	1 1/4	23	1	26 1/4
660	69 1/4	52 1/2	75	69	60	73 1/2	55 1/4	50 1/4	64 1/4	69 1/4	41 1/4	79	7	26 1/4	35 1/4	6	78 1/2	6	21 1/2	46 1/4	4 1/4	1 1/4	25	1	29 1/4
730	76 1/4	57 1/4	83	76	66	81	61 1/4	55 1/4	71 1/4	76 1/4	46	87 1/4	8	28 1/4	37 1/4	6	87	6	24	52	4 1/4	1 1/4	27 1/2	1	32 1/4
807	85	64	90 1/2	85 1/2	74 1/4	91	68 1/4	61 1/4	79 1/4	84 1/4	51 1/4	96 1/4	8	32	42	6	96	6	27	58 1/4	5 1/4	1 1/4	30 1/2	1 1/4	35 1/4
890	94	70 1/2	100 1/4	94	81 1/2	100	75 1/4	67 1/4	87 1/4	93 1/4	56 1/4	106 1/4	9	35 1/4	47 1/4	8	106	8	30	62	5 1/4	1 1/4	35	1 1/4	39 1/4
982	103 1/4	77 1/4	111	103	89 1/4	109 1/4	83 1/4	74 1/4	96 1/4	103 1/2	61 1/2	118	9	38 1/4	50 1/4	8	117	8	34	70	6 1/4	1 1/4	39	1 1/4	43

**NOTE: All Dimensions are Submittal Data ONLY -
Do Not use for Construction unless Certified**

B-542

**QUICK FACTS
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TYPE B WHEEL BACKWARD INCLINED

Performs at maximum efficiencies with relatively low tip speeds. Quiet operation, non-overloading characteristics, resulting in the smallest wheel diameter for given CFM. Good for corrosive environments. Easily made of special alloys.

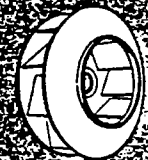
**MAXIMUM RPM
steel wheels and shafts**

Wheel Diameter	Wheel Size	Page No.	VOLUME		Max Safe RPM @ 70° F		Max Safe RPM @ 600° F		Max Safe RPM @ 800° F	
			Min. CFM	Max. CFM	Heavy Duty 12" SP	Extra 24" SP	Heavy Duty 12" SP	Extra 24" SP	Heavy Duty 12" SP	Extra 24" SP
18.250"	182	8	3040	12920	3872	4521	3291	3851	2904	3398
20.000"	200	9	3680	15640	3533	4125	3083	3506	2660	3094
22.250"	222	10	4528	19244	3178	3708	2710	3152	2382	2781
24.500"	245	11	5520	23460	2884	3368	2451	2863	2163	2526
27.000"	270	12	6720	30240	2617	3056	2224	2598	1963	2292
30.000"	300	13	8240	37080	2355	2750	2202	2338	1767	2063
33.000"	330	14	10032	45144	2141	2500	1820	2125	1680	1875
36.500"	365	15	13005	52020	1936	2260	1646	1921	1450	1695
40.250"	402	16	14880	63240	1756	2050	1492	1742	1317	1537
44.500"	445	17	18192	77316	1588	1854	1350	1576	1191	1391
49.000"	490	18	22064	93772	1442	1684	1220	1431	1081	1263
54.250"	542	19	27040	114290	1303	1521	1107	1293	977	1141
60.000"	600	20	35139	140556	1178	1375	1001	1169	883	1031
66.000"	660	21	42517	170068	1071	1250	910	1063	803	938
73.000"	730	22	52020	208080	968	1130	823	961	726	848
80.750"	807	23	63648	254592	875	1022	744	869	656	766
89.000"	890	24	77316	309264	794	927	675	788	596	695
98.250"	982	25	94231	376924	719	840	610	714	539	630

NOTE: Custom Designed Features/
Accessories Available. Refer to the
General Catalog #G-10.

TYPE B NON-OVERLOAD WHEEL

SIZE 542
54.25" DIA.



Outlet Area = 16,900 Sq. FL
Tip Speed = 14,203 X RPM
Single Width, Single Inlet

Class II construction
available only in the dark
yellow areas in the rating
tables.

Heavy Duty construction from
2" thru 12" W.G.S.P.

Extra Heavy Duty construction
from 13" thru 24" W.G.S.P.

			STATIC PRESSURE (INCHES)							
VOLUME	OV	VP	2.000	2.500	3.000	3.500	4.000	4.500	5.000	
CFM	FPM	IN	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
27040	1600	0.16	437 10.9	470 13.2	502 15.6					
28730	1700	0.18	447 11.8	480 14.2	511 16.7	540 19.3				
30420	1800	0.20	458 12.9	489 15.3	520 17.9	548 20.6	576 23.4			
32110	1900	0.23	469 14.0	500 16.5	529 19.2	557 21.9	584 24.8	610 27.8		
33800	2000	0.25	481 15.2	510 17.8	539 20.6	566 23.4	593 26.3	618 29.4	643 32.5	
35490	2100	0.27	493 16.5	522 19.2	549 22.0	576 24.9	602 27.9	627 31.0	651 34.2	
37180	2200	0.30	505 17.8	533 20.7	560 23.6	586 26.6	611 29.7	636 32.8	660 36.1	
40560	2400	0.36	531 20.8	557 23.9	583 27.0	608 30.2	632 33.4	655 36.7	678 40.1	
43940	2600	0.42	558 24.2	583 27.4	607 30.8	630 34.2	653 37.6	676 41.1	698 44.7	
47320	2800	0.49	586 27.9	609 31.5	632 35.0	654 38.6	676 42.2	698 45.9	719 49.7	
50700	3000	0.56	615 32.2	637 35.9	659 39.7	680 43.5	700 47.3	721 51.2	741 55.2	
54080	3200	0.64	645 36.9	666 40.8	686 44.8	706 48.8	726 52.9	745 57.0	764 61.2	
57460	3400	0.72	676 42.1	695 46.3	714 50.5	733 54.7	752 59.0	770 63.3	789 67.7	
60840	3600	0.81	706 47.8	725 52.2	743 56.7	761 61.1	779 65.6	797 70.2	814 74.8	
64220	3800	0.90	738 54.1	755 58.7	772 63.4	790 68.1	807 72.9	824 77.6	840 82.4	
67600	4000	1.00	769 61.0	786 65.9	802 70.8	819 75.7	835 80.7	851 85.7	867 90.7	
74360	4400	1.21	834 76.7	849 82.0	864 87.4	879 92.8	894 98.2	908 104	923 109	
81120	4800	1.44	899 95.2	913 101	927 107	940 113	954 119	968 124	981 130	
87880	5200	1.69	965 117	978 123	991 129	1003 136	1016 142	1029 148	1041 155	
94640	5600	1.96	1032 141	1044 148	1055 155	1067 162	1079 168	1091 175	1103 182	
101400	6000	2.24	1099 170	1110 177	1121 184	1132 191	1143 199	1154 206	1165 213	

			STATIC PRESSURE (INCHES)							
VOLUME	OV	VP	6.000	7.000	8.000	9.000	10.00	11.00	12.00	
CFM	FPM	IN	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
37180	2200	0.30	705 42.9							
40560	2400	0.36	722 47.2	763 54.6						
43940	2600	0.42	740 52.0	780 59.7	819 67.7					
47320	2800	0.49	759 57.4	798 65.3	836 73.6	872 82.1	906 91.0			
50700	3000	0.56	780 63.2	818 71.5	854 80.0	889 88.8	923 97.9	956 107		
54080	3200	0.64	802 69.6	838 78.2	874 87.1	908 96.2	941 106	973 115	1004 125	
57460	3400	0.72	825 76.5	860 85.5	894 94.8	927 104	959 114	991 124	1021 134	
60840	3600	0.81	849 84.0	882 93.4	915 103	948 113	979 123	1009 133	1039 143	
64220	3800	0.90	874 92.1	906 102	938 112	969 122	999 132	1029 143	1058 154	
67600	4000	1.00	899 101	930 111	961 121	991 132	1021 143	1050 154	1078 165	
70980	4200	1.10	926 110	956 121	985 132	1014 143	1043 154	1071 165	1099 176	
74360	4400	1.21	953 120	982 131	1010 142	1038 154	1066 165	1093 177	1120 189	
77740	4600	1.32	980 131	1008 142	1036 154	1063 166	1090 178	1116 190	1142 202	
81120	4800	1.44	1009 142	1035 154	1062 166	1088 179	1114 191	1140 203	1166 216	
84500	5000	1.56	1037 152	1063 167	1089 179	1114 192	1140 205	1165 218	1189 231	
87880	5200	1.69	1067 167	1092 180	1116 193	1141 206	1166 220	1190 233	1214 246	
94640	5600	1.96	1126 196	1150 210	1173 224	1196 238	1219 252	1242 266	1264 280	
101400	6000	2.24	1187 228	1209 243	1231 257	1253 272	1274 287	1296 302		
108160	6400	2.55	1249 264	1270 279	1290 295					

			STATIC PRESSURE (INCHES)							
VOLUME	OV	VP	13.00	14.00	16.00	18.00	20.00	22.00	24.00	
CFM	FPM	IN	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
54080	3200	0.64	1034 135							
57460	3400	0.72	1051 144	1080 155						
60840	3600	0.81	1068 154	1096 165	1151 187					
64220	3800	0.90	1086 164	1114 176	1168 198	1220 222				
67600	4000	1.00	1106 176	1133 187	1186 211	1236 235	1285 260			
70980	4200	1.10	1126 188	1152 200	1204 224	1254 248	1302 274	1348 300		
74360	4400	1.21	1147 201	1172 213	1223 237	1272 263	1319 289	1365 316	1409 343	
77740	4600	1.32	1168 214	1193 227	1243 252	1291 278	1337 304	1382 332	1426 360	
81120	4800	1.44	1190 229	1215 241	1263 267	1310 294	1356 321	1400 349	1443 378	
84500	5000	1.56	1214 244	1238 257	1285 284	1331 311	1375 339	1419 367	1461 396	
87880	5200	1.69	1237 260	1261 273	1307 301	1352 329	1395 357	1438 387	1480 416	
94640	5600	1.96	1287 294	1309 309	1353 338	1395 367	1437 397	1478 428	1519 459	
101400	6000	2.24	1338 333	1359 348	1401 379	1442 410	1482 441	1521 473		
108160	6400	2.55	1392 375	1412 391	1451 423	1490 456				
114920	6800	2.88	1447 421	1466 438	1504 472					
121680	7200	3.23	1504 471	1522 489						

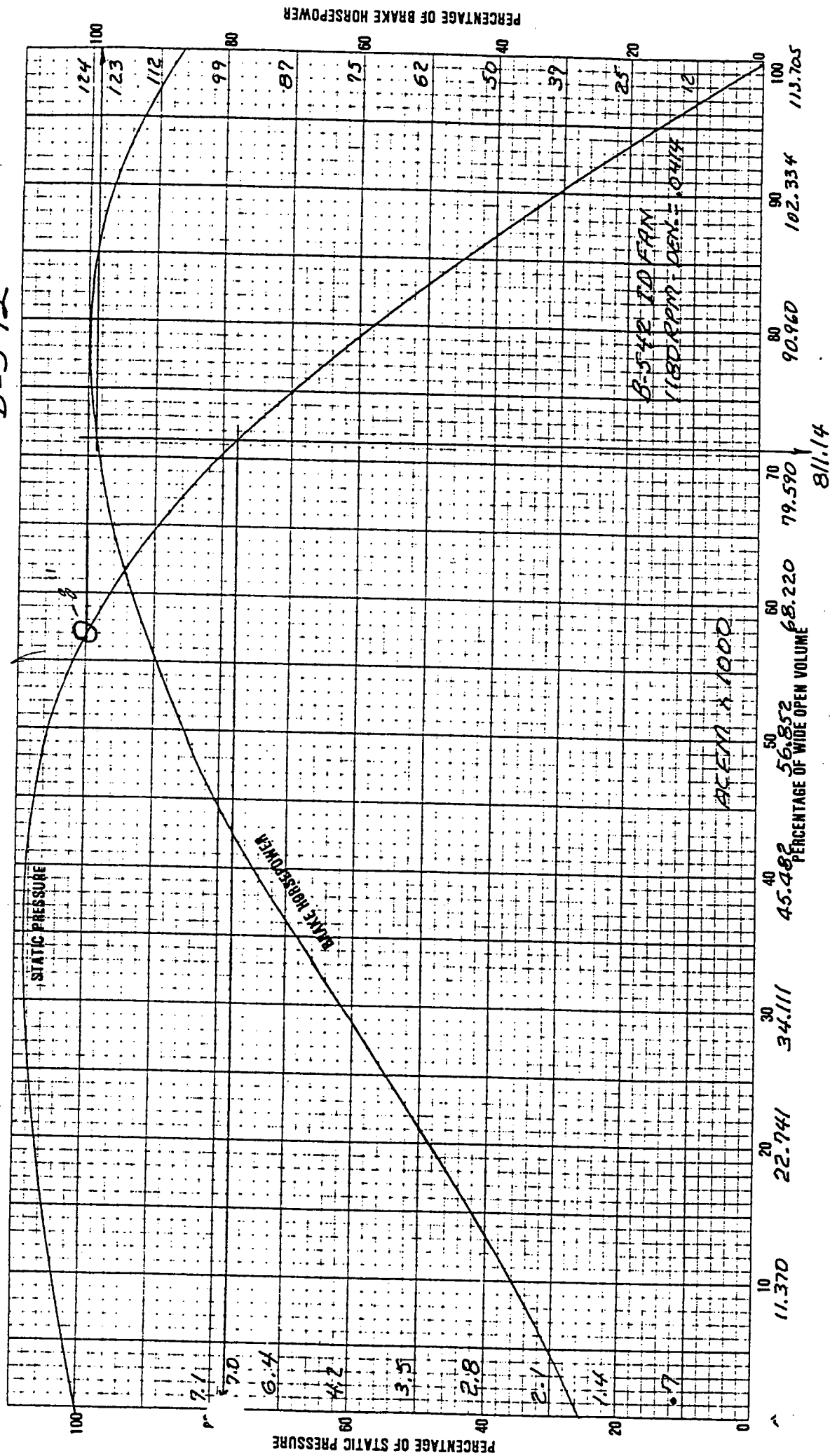
NOTES:

1. The above ratings are for fans with outlet duct, and open inlet.
2. No provision is made in the tables for external loss due to obstructions in the airstream such as inlet boxes, nested variable inlet vanes, external variable inlet vanes, inlet box dampers, discharge dampers, inlet screens. These losses, if any MUST be added to the system loss before fan selection.
3. BHP does NOT include drive loss.



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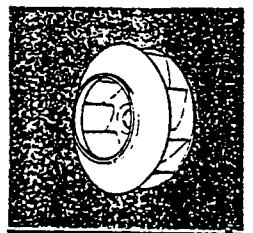


INDUSTRIAL AIR PRODUCTS
26
380° F
90 990

VOLUME FACTORS @ 100% X RPM

SIZE	182	=	3.54
	200	=	4.70
	222	=	6.42
	245	=	8.54
	270	=	11.43
	300	=	15.68
	330	=	20.87
	365	=	29.50
	402	=	39.41
	445	=	53.33
	490	=	71.20
	542	=	96.36
	600	=	130.00
	660	=	173.03
	730	=	234.13
	807	=	316.31
	890	=	424.29
	982	=	569.93

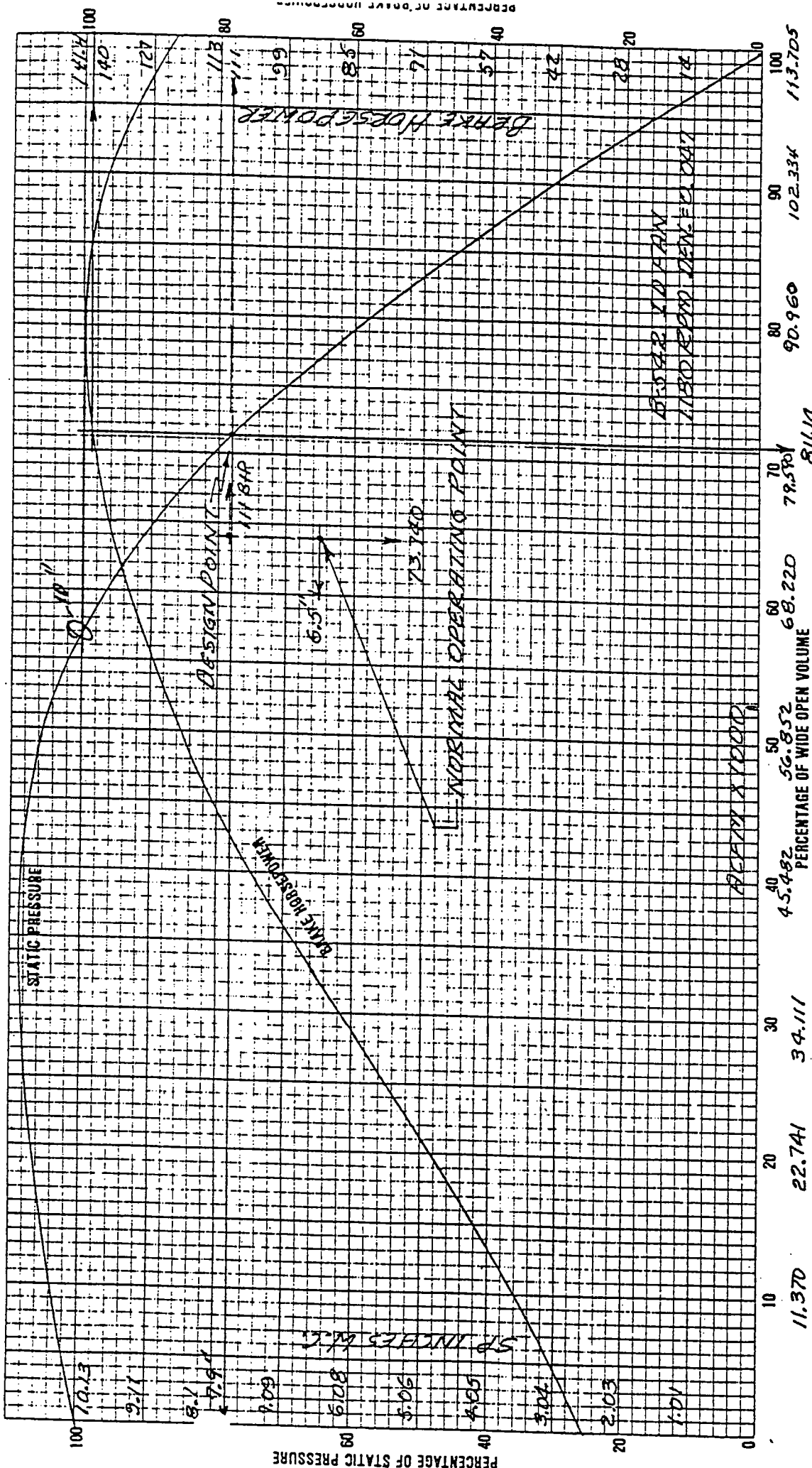
PERFORMANCE CURVE



TYPE B
NON-OVERLOAD
WHEEL

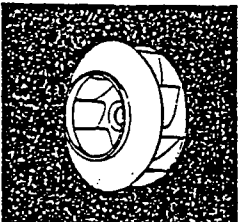
11.370 22.741 34.111 45.482 56.852 68.220 79.590 90.960 102.334 113.705

B-542



VOLUME FACTORS	SIZE FACTOR
100%	1.00
105%	1.05
110%	1.10
115%	1.15
120%	1.20
125%	1.25
130%	1.30
135%	1.35
140%	1.40
145%	1.45
150%	1.50
155%	1.55
160%	1.60
165%	1.65
170%	1.70
175%	1.75
180%	1.80
185%	1.85
190%	1.90
195%	1.95
200%	2.00
205%	2.05
210%	2.10
215%	2.15
220%	2.20
225%	2.25
230%	2.30
235%	2.35
240%	2.40
245%	2.45
250%	2.50
255%	2.55
260%	2.60
265%	2.65
270%	2.70
275%	2.75
280%	2.80
285%	2.85
290%	2.90
295%	2.95
300%	3.00
305%	3.05
310%	3.10
315%	3.15
320%	3.20
325%	3.25
330%	3.30
335%	3.35
340%	3.40
345%	3.45
350%	3.50
355%	3.55
360%	3.60
365%	3.65
370%	3.70
375%	3.75
380%	3.80
385%	3.85
390%	3.90
395%	3.95
400%	4.00
405%	4.05
410%	4.10
415%	4.15
420%	4.20
425%	4.25
430%	4.30
435%	4.35
440%	4.40
445%	4.45
450%	4.50
455%	4.55
460%	4.60
465%	4.65
470%	4.70
475%	4.75
480%	4.80
485%	4.85
490%	4.90
495%	4.95
500%	5.00
505%	5.05
510%	5.10
515%	5.15
520%	5.20
525%	5.25
530%	5.30
535%	5.35
540%	5.40
545%	5.45
550%	5.50
555%	5.55
560%	5.60
565%	5.65
570%	5.70
575%	5.75
580%	5.80
585%	5.85
590%	5.90
595%	5.95
600%	6.00
605%	6.05
610%	6.10
615%	6.15
620%	6.20
625%	6.25
630%	6.30
635%	6.35
640%	6.40
645%	6.45
650%	6.50
655%	6.55
660%	6.60
665%	6.65
670%	6.70
675%	6.75
680%	6.80
685%	6.85
690%	6.90
695%	6.95
700%	7.00
705%	7.05
710%	7.10
715%	7.15
720%	7.20
725%	7.25
730%	7.30
735%	7.35
740%	7.40
745%	7.45
750%	7.50
755%	7.55
760%	7.60
765%	7.65
770%	7.70
775%	7.75
780%	7.80
785%	7.85
790%	7.90
795%	7.95
800%	8.00
805%	8.05
810%	8.10
815%	8.15
820%	8.20
825%	8.25
830%	8.30
835%	8.35
840%	8.40
845%	8.45
850%	8.50
855%	8.55
860%	8.60
865%	8.65
870%	8.70
875%	8.75
880%	8.80
885%	8.85
890%	8.90
895%	8.95
900%	9.00
905%	9.05
910%	9.10
915%	9.15
920%	9.20
925%	9.25
930%	9.30
935%	9.35
940%	9.40
945%	9.45
950%	9.50
955%	9.55
960%	9.60
965%	9.65
970%	9.70
975%	9.75
980%	9.80
985%	9.85
990%	9.90
995%	9.95
1000%	10.00

G. C. BROACH Co. #90990-7



TYPE B
NON-OVERLOAD
WHEEL

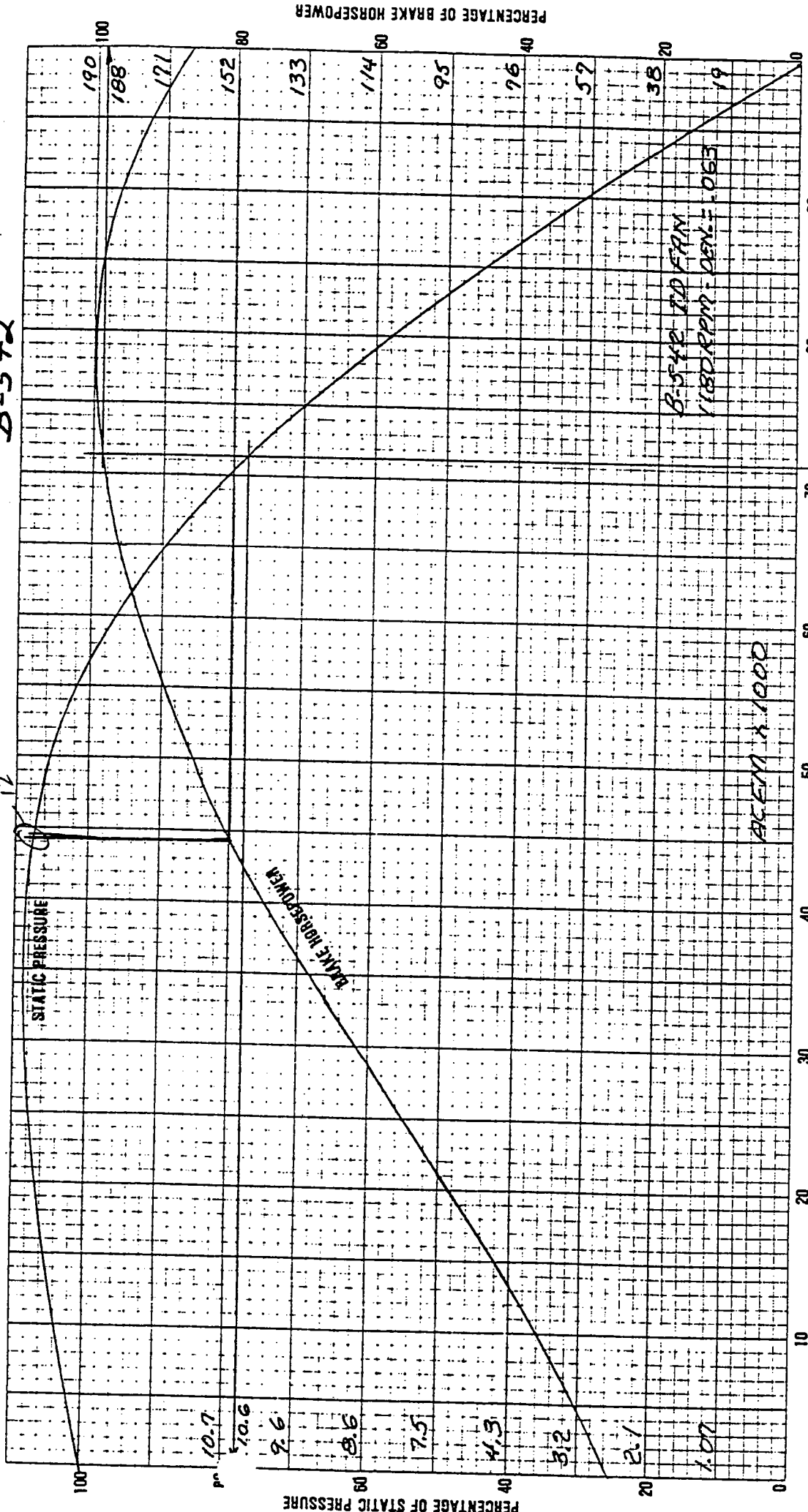
PERFORMANCE CURVE



26

280° F

B-542



PERCENTAGE OF WIDE OPEN VOLUME 11.370 22.741 34.111 45.482 56.852 68.220 79.590 90.960 102.334 113.705

PERCENTAGE OF BRAKE HORSEPOWER 100 90 80 70 60 50 40 30 20 10 0

STATIC PRESSURE 10.7 10.6 9.6 8.6 7.5 4.3 3.2 2.1 1.0

PERCENTAGE OF WIDE OPEN VOLUME 11.370 22.741 34.111 45.482 56.852 68.220 79.590 90.960 102.334 113.705

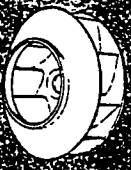
PERCENTAGE OF BRAKE HORSEPOWER 100 90 80 70 60 50 40 30 20 10 0

B-542 TD FAN
1180 RPM - DEN. = .063

ACEM X 1000

811.14

TYPE B
NON-OVERLOAD
WHEEL



PERFORMANCE CURVE

VOLUME FACTORS
© 100% X RPM.

SIZE	182	=	3.54
200	=	4.70	
222	=	6.42	
245	=	8.54	
270	=	11.43	
300	=	15.68	
330	=	20.87	
365	=	29.50	
402	=	39.41	
445	=	53.33	
490	=	71.20	
542	=	96.36	
600	=	130.00	
660	=	173.03	
730	=	234.13	
807	=	316.31	
890	=	424.29	
982	=	569.93	



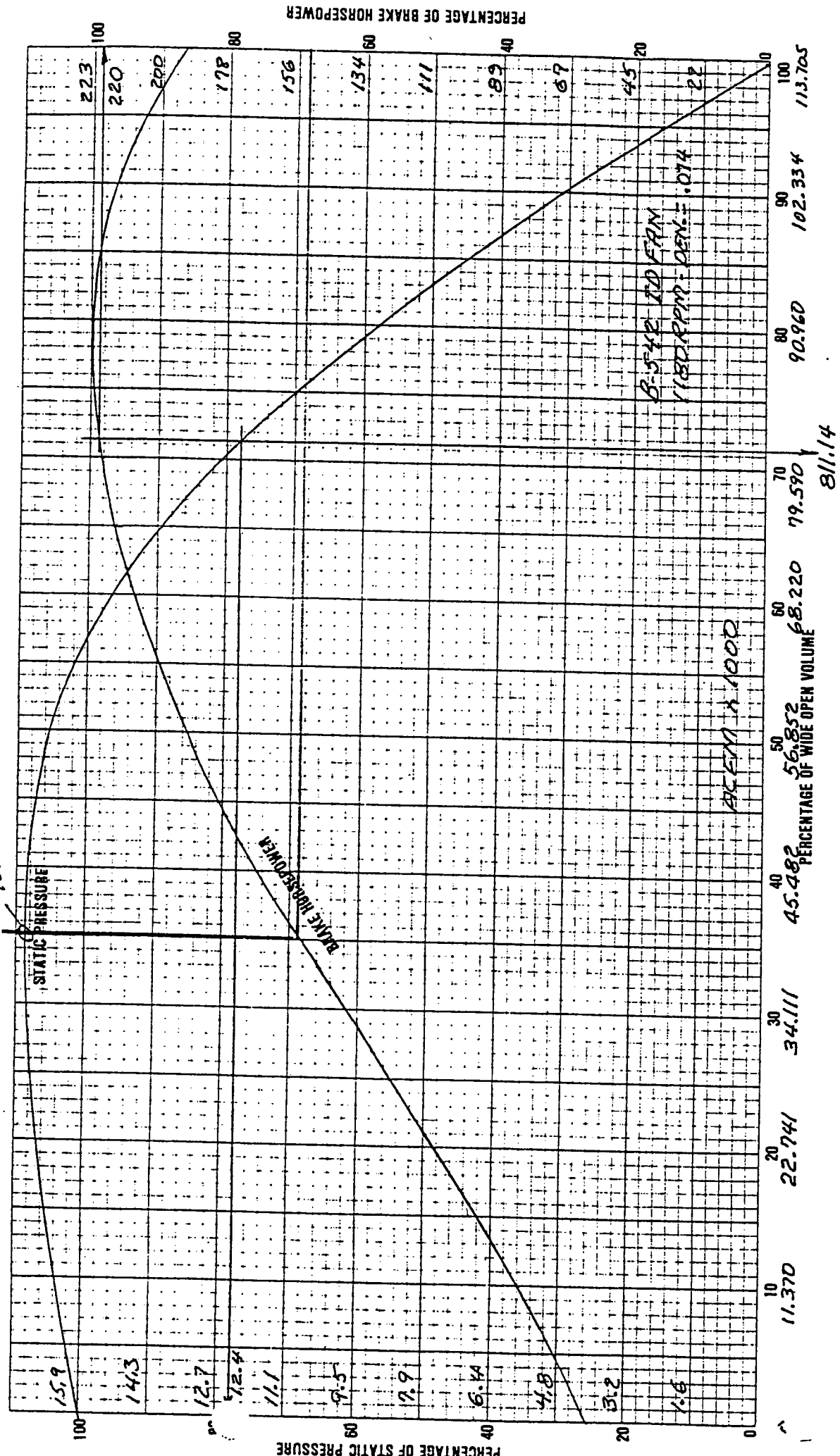
90990

909

00

B-542

16.5"



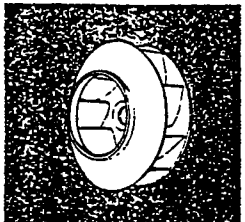
INDUSTRIAL AIR PRODUCTS
26
90 990
10° F

VOLUME FACTORS
@ 100% X RPM

SIZE FACTOR

982	=	569.93
890	=	424.29
807	=	316.31
730	=	234.13
660	=	173.03
600	=	130.00
542	=	96.36
490	=	71.20
445	=	53.33
402	=	39.41
365	=	29.50
330	=	20.87
300	=	15.68
270	=	11.43
245	=	8.54
222	=	6.42
200	=	4.70
182	=	3.54

PERFORMANCE CURVE



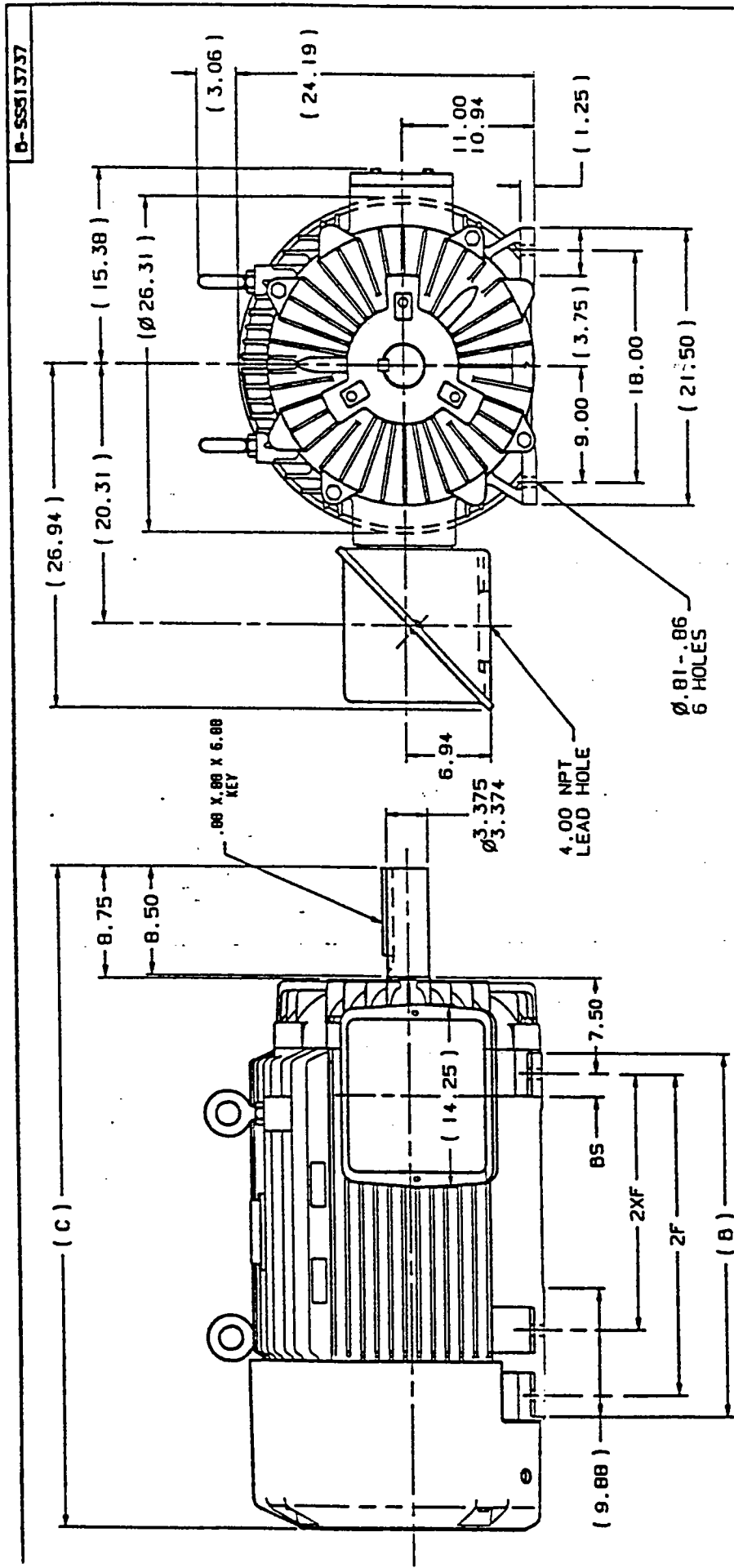
TYPE B
NON-OVERLOAD
WHEEL

10 11.370 20 22.741 30 34.111 40 45.482 50 56.852 60 68.220 70 79.590 80 90.960 90 102.334 100 113.705

811.14

6-54E TD FPM

B-542



NOTES:

1. C. BOX CAN BE ROTATED IN 90° STEPS.
2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	2XF	BS
2875	4471	28.25	51.69	20.00	1.78	
2875	449T	28.25	51.69	25.00	1.78	

<input checked="" type="checkbox"/> SURFACE FINISHES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE TOL. ON DIM. UNLESS SPECIFIED OTHERWISE		DRAWN TLB 1-12-90 CHECKED BY APPROVED BY	
MTL SPEC		MERVATION MABEL TOWNSEND WAUSAU, WISCONSIN 54980	
FINISH		DIM TO B-55513737	
PART NAME OUTLINE - TEFC 447-449T FR. - STD.		CAD FILE NO. 55513737	
TLB	NEW DRAWING - 3654895	DATE	
MAX	CHANGE	DATE	

B-542

*** REQUESTOR: LDS.WA - DISTRIBUTOR MARKETING TERM=WCE4; 03/26/91, 06:29am ***

*** S Y S M E F O R M P R I N T ***

MESSAGE ID: 222046 DATE: 03/25/91 TIME: 02:44pm PRIORITY: 000

SUBJECT: 150 HP CERTIFIED PRINT

MARATHON ELECTRIC MANUFACTURING CORPORATION
100 EAST RANDOLPH STREET
WAUSAU WISCONSIN 54401

CERTIFIED DIMENSION DATA

FOR.: L&S ELECTRIC OUTLINE NO: B-SS513737-2875
5101 MESKER ROAD
SCHOFIEL, WIS 54476

ATTN: LAURIE NELSEN

CUSTOMER.....: INDUSTRIAL AIR PRODUCTS
CUSTOMER ORDER NO: 13137
M.E. ORDER NO....: 3758949
MODEL NUMBER.....: 449TTFS6590AN
TYPE.....: TFS
HP/KW.....: 150
CYCLE.....: 60
VOLTAGE.....: 460
DUTY CYCLE.....: CONTINUOUS
ENCLOSURE.....: XRI HIGH EFF
OTHER INFORMATION: NA
ROTOR WK² = 118 LB FT²
FRAME.....: 447/449T
RPM.....: 1200
PHASE.....: 3
INSULATION: H
AMBIENT...: 40 DEGREES C
BEARINGS...: BALL-BALL

CERTIFIED BY: JIM STROJNY
SIGNATURE...: *Jim Strojny*

DATE: 03/25/91

"BUY MARATHON MOTORS"

B-542

*** REQUESTOR: LOS.WA - DISTRIBUTOR MARKETING TERM=WCE4; 03/25/91, 02:29pm ***

*** SYS M E F O R M P R I N T ***

MESSAGE ID: 222038 DATE: 03/25/91 TIME: 02:27pm PRIORITY: 000

SUBJECT: 150 HP PERF DATA

| MARATHON ELECTRIC MFG CORPORATION, 100 EAST RANDOLPH ST. WAUSAU, WISC |
| ENGINEERING PERFORMANCE DATA |

| CLIENT.....: L&S ELECTRIC FOR WILL JONES & ASSOCIATES |
| PROJECT.....: I.A.P. PROJECT |
| QUANTITY.....: 4 |

| ENCLOSURE.....: XRI ULTRA HIGH EFFICIENCY TEFC SEVERE DUTY |
| HORSEPOWER.....: 150 |
| VOLTS.....: 460 / |
| PHASE.....: 3 |
| HERTZ.....: 60 |
| FRAME.....: 447/449T |
| SYNCHRONOUS RPM.....: 1200 |
| FULL LOAD RPM.....: 1191 |
| EFFICIENCY |
| FULL LOAD.....: 95.4 |
| 3/4 LOAD.....: 95.3 |
| 1/2 LOAD.....: 94.5 |
| POWER FACTOR |
| FULL LOAD.....: 77.0 |
| 3/4 LOAD.....: 73.0 |
| 1/2 LOAD.....: 63.0 |
| FULL LOAD AMPS.....: 191 |
| LOCKED ROTOR AMPS.....: 1050 |
| LOCKED ROTOR TORQUE...: 155 PERCENT |
| BREAKDOWN TORQUE.....: 220 PERCENT |
| INSULATION.....: H |
| SERVICE FACTOR.....: 1.15 |
| AMBIENT TEMP.....: 40 DEGREE C CONTINUOUS |
| LOCKED ROTOR CODE.....: KVA CODE F |
| MISC.....: WINDING H-T44968-2 |
| : |
| : |
| : |
| : |

| "FAX 715-675-9413" "BUY MARATHON ELECTRIC MOTORS" |

FPBC 71459101,4,A,2

FFS-CLEAR SCREEN

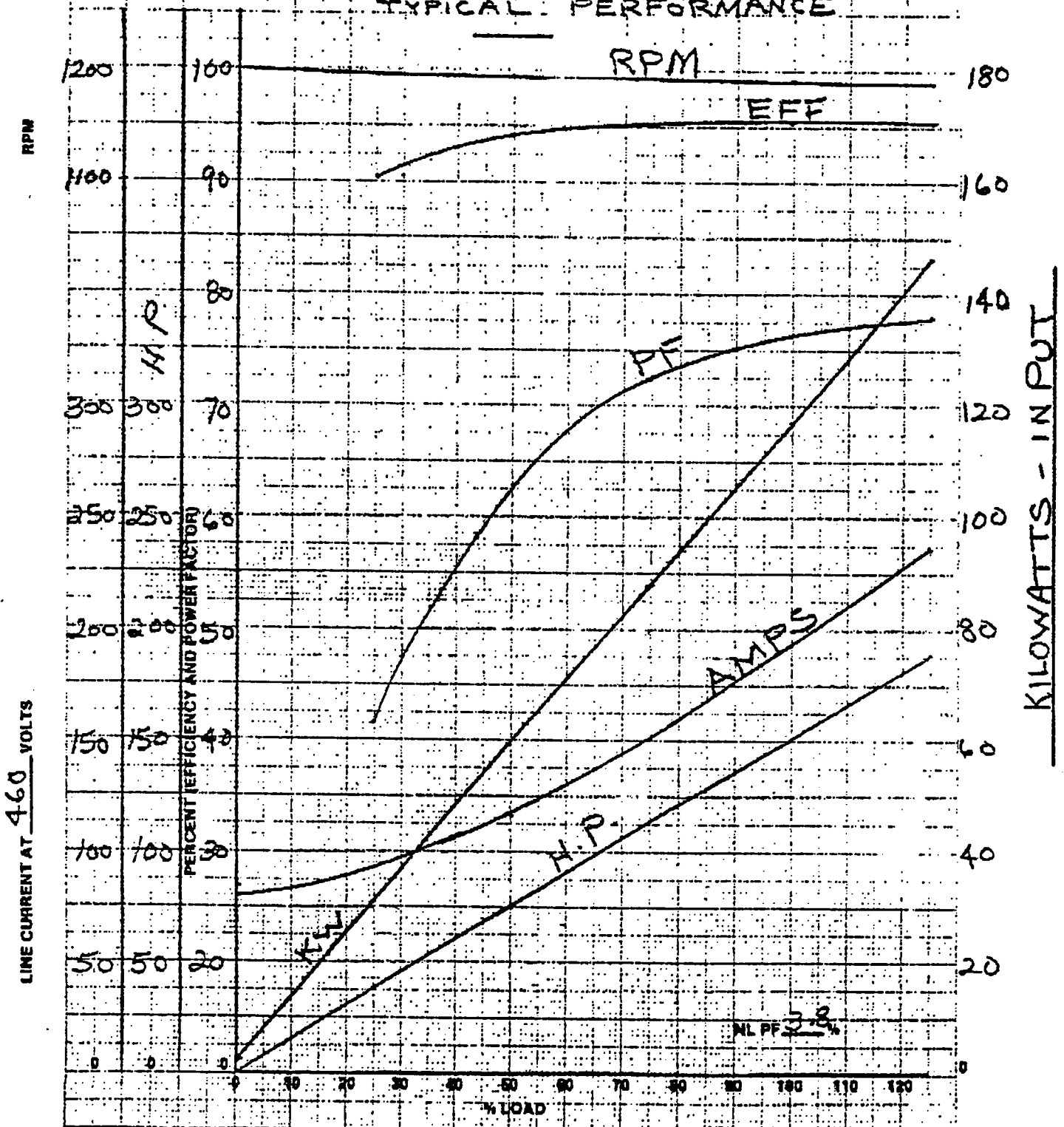
WAUSAU MOTOR-FRONT PAGE BILL OF MATERIAL 03/25/91 PAGE 1 CHR502A

MODEL 7145910-1 DESC 449TTFS6590AN APPR TAG A AUTH/APPR

FRAME-MTG	FR- 74 449T	ENCLOSURE	EN- 19 TEFC
HORSEPOWER	HP- 65 150	VOLTAGE	VO- 35 460
FRAME-LAM	FL- 36 440 20.3	MOUNTING	MT- 41 STD RIGD/FT/RIGID BASE
FRAME-MATL	FM- 21 CI=CAST IRON S	ELECT TYPE	ET- 37 3 PH SQ CAGE IND RUN
BEAR TYPE	BR- 11 BALL	SHAFT TYPE	ST- 19 NEMA-STD-LONG OR FRACT
INSUL CLS	IN- 19 CLASS H	SHAFT DESC	3.38 X 8.50 IN. SEK
ROTATION	RO- 17 REVERSIBLE	ELEC PERF	EP- 13 DESIGN B
SHAFT MATL	SM- 11 STANDARD STEEL	THERM PROT	TP- 29 NONE/CON NOT APPR
POLES	PO- 15 6	DUTY/AMB	DA- 01 CONT. 40 C AMB
FREQUENCY	HZ- 13 60 HZ	STACK LENGTH	14.00
KVA CODE	LR- 31 NOT AVAILABLE	PRODUCT CODE	- - - - -
RPM	1191	LEADS DESC	12-6 IN. LEADS AT A,
PHASE	3	OUTLINE	B-SS513737-2875
TYPE	TFS	WINDING	H-T44968-2
SHFT E/BRG	319	CONN DIAG	A-EE7300BH
OPP E/BRG	319	FL EFF	FL PF MAX KVAR
NAMPL FRAME	447/449T	CORR AMPS	
NAMEPLT HP	150	SECOND VOLTS	
AMPS	TEST MOTOR	LAYOUT	D-FC440-20.38
SECOND AMP		SVC FACT AMP	
SVC FACT	1.15	START AMPS	



PERFORMANCE CURVE
HP: 1200 RPM: 460 VOLTS: 192 AMPS
3 PHASE: 60 HERTZ-NEMA DESIGN B
SQUIREL CAGE INDUCTION MOTOR
TYPICAL PERFORMANCE



FRAME 449T

BDT 1424 LB. FT. 215 %

100% = 660.8 LB. FT.

LRT 1014 LB. FT. 153 %

PU 853 LB. FT. 129 %

CURVE NO. H-T44968-2

FORM 888-R1

* LRA 1023 AMPS @ 460 VOLTS

M.A.T. 11-9-90

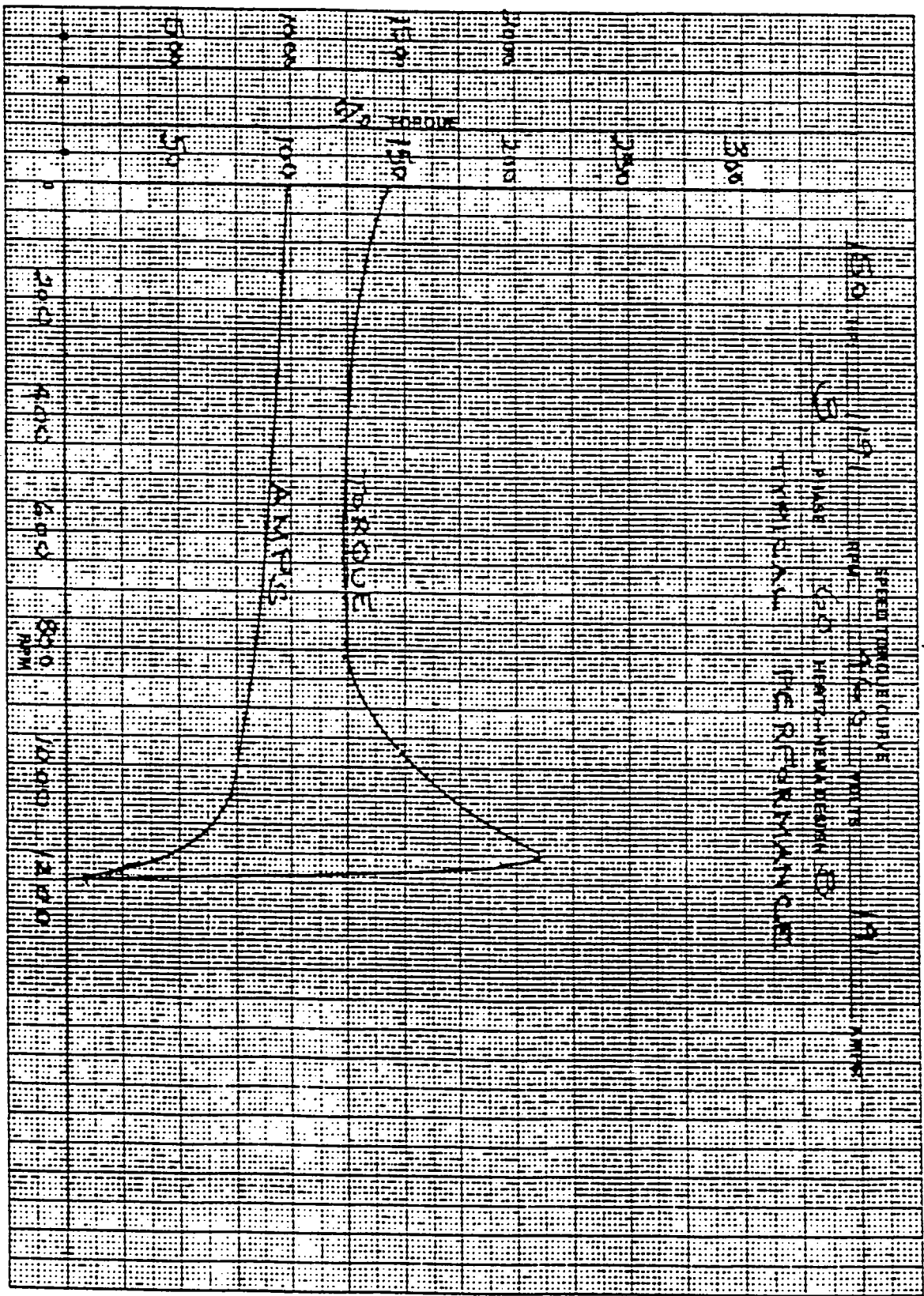
CLASSIFIED DATA

B-542

LINE CURRENT AT 460 VOLTS

MARATHON ELECTRIC MANUFACTURING CORPORATION

WAUSAU, WISCONSIN



FRAME 447/449T
FORM 888-R1

CURVE NO. H-T94968-2

MAT-28-91

100% - CL1 LB. FT.