



Product Specifications

IntelliPak™ II

Direct drive plenum supply fan (120-150 ton)



March 2020

RT-PRC063B-EN

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Mechanical Specifications

The direct drive plenum supply fan shall be one single width, single inlet 9-blade plenum fan. Fan blades shall be aluminum backward-inclined airfoil. Plenum fans shall be direct driven.

Entire assembly shall be completely isolated from unit and fan board by 2" deflection spring isolation. Fan shall not require routine maintenance such as fan bearing lubrication, belt tensioning and replacement, sheave alignment, and setscrew torque checks.

Airflow orientation options

The DDP supply fan is available with down flow, horizontal left and horizontal right supply airflow configurations. Designs for two piece construction, and blank sections in the supply section have not been designed and would require additional design time.

Special Fan features

Fans are available with Piezometer rings and /or shaft grounding upon request.

Heat Options

Units are available with steam or hot water heat in the draw through position. Gas heat and electric heat are not available at this time.

Table 1. DDP fan assembly technical data

Nominal Voltage/ Frequency	460 Volt/ 60 Hz/ 3 Phase
Motor Description	ODP - 6 pole direct coupled
Fan Maximum speed	1200 rpm

Table 2. DDP fan motor technical data

Motor Horsepower	30	40	50	60	75
Fan motor FLA (A)	38	50.9	62.5	75.5	86.9
Fan motor LRA (A)	245.6	337	391	520	541

Disallowables

The following options are not allowed:

- Gas Heat
- Electric Heat
- Bypass
- Blank Section (would require additional design time)
- 2 or 3 piece (would require additional design time)
- 90-105 ton

Application Considerations

Fan application points should be selected within the area created in Figure 1 by the 55% wide open left (red line) and the peak efficiency point (bold black line). Selection points to the left of the red line shown above may experience fan instability.

Pricing

To price this design special, select a 120-150 ton IntelliPak II with Std CFM Supply Fan w/ HP equal to DDP motor selection, w/o bypass.

For additional Direct Drive Plenum Net Add, please contact Large Commercial Product Support or Abigail Adkins (abigail.adkins@trane.com).

Figure 1. DDP fan curve

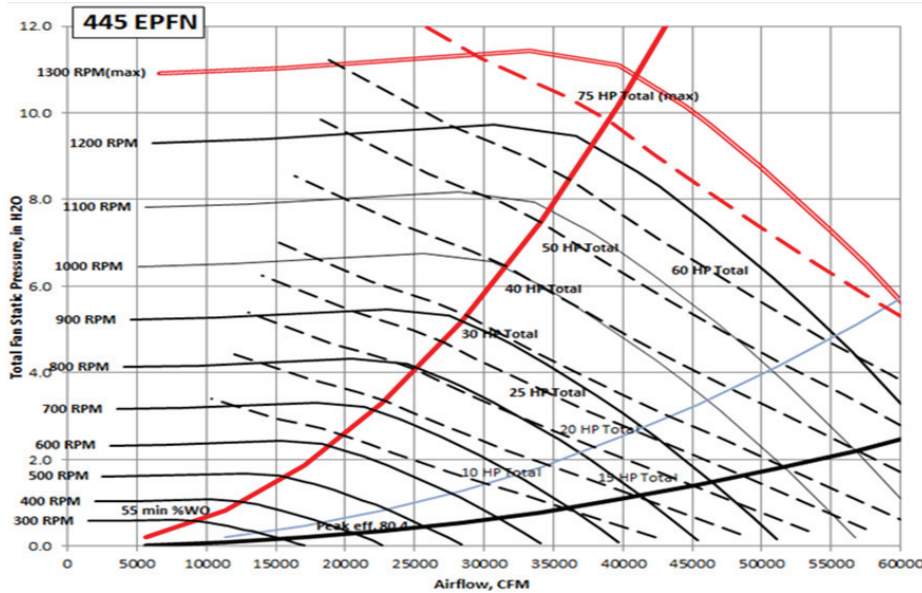


Table 3. Supply fan performance, 120- 150 ton, 44.5" direct drive plenum

Total Static Pressure																		
CFM	0.50		0.75		1.00		1.25		1.50		1.75		2.00		2.25		2.50	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25000	490	3.65	515	4.61	539	5.63	563	6.68	587	7.76	610	8.87	633	10.02	655	11.19	677	12.44
27500	530	4.43	552	5.48	575	6.56	597	7.68	619	8.83	640	10.02	661	11.23	682	12.48	703	13.78
30000	570	5.33	591	6.45	611	7.61	632	8.80	652	10.02	672	11.27	692	12.56	711	13.88	730	15.23
32500	611	6.37	630	7.57	649	8.80	668	10.06	687	11.36	705	12.68	724	14.03	742	15.42	760	16.85
35000	652	7.54	670	8.83	688	10.14	705	11.47	723	12.86	740	14.25	758	15.69	775	17.11	792	18.63
37500	694	8.88	710	10.24	727	11.63	743	13.04	760	14.49	776	15.98	793	17.49	809	19.01	825	20.54
40000	736	10.38	751	11.81	767	13.29	782	14.80	798	16.33	813	17.86	829	19.44	844	21.01	859	22.63
42500	778	12.06	793	13.58	807	15.14	822	16.71	836	18.30	851	19.95	866	21.59	880	23.26	894	24.96
45000	820	13.94	834	15.53	848	17.17	861	18.82	875	20.49	889	22.20	903	23.94	917	25.69	931	27.47
47500	863	16.00	876	17.69	889	19.40	902	21.14	915	22.91	928	24.65	941	26.47	954	28.30	967	30.14
50000	905	18.29	918	20.05	931	21.85	943	23.66	955	25.51	967	27.33	980	29.23	992	31.12	1005	33.05
52500	948	20.80	961	22.65	973	24.51	984	26.41	996	28.32	1007	30.27	1019	32.23	1031	34.21	1043	36.22
55000	991	23.55	1003	25.46	1014	27.41	1026	29.38	1037	31.40	1048	33.39	1059	35.46	1070	37.52	1082	39.55
Total Static Pressure																		
CFM	2.75		3.00		3.25		3.50		3.75		4.00		4.25		4.50		4.75	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25000	699	13.65	720	14.92	741	16.24	761	17.53	781	18.85								
27500	723	15.07	743	16.41	762	17.75	782	19.13	801	20.52	819	21.93	839	23.45	856	24.85	874	26.34
30000	750	16.62	768	17.97	787	19.43	806	20.91	823	22.31	841	23.81	859	25.36	876	26.90	894	28.47
32500	778	18.28	796	19.72	813	21.23	831	22.74	848	24.30	865	25.86	882	27.46	898	29.03	915	30.70
35000	809	20.14	825	21.64	842	23.20	859	24.80	875	26.39	891	28.01	907	29.73	923	31.35	939	33.05
37500	841	22.12	857	23.74	872	25.35	888	26.99	903	28.66	919	30.43	934	32.09	949	33.83	964	35.58
40000	875	24.34	889	25.97	904	27.68	919	29.43	934	31.13	948	32.91	963	34.71	977	36.51	991	38.32
42500	909	26.68	923	28.43	937	30.19	951	31.97	966	33.84	979	35.63	993	37.51	1006	39.29	1020	41.25
45000	944	29.26	958	31.05	971	32.86	984	34.74	998	36.62	1011	38.50	1024	40.45	1037	42.40	1050	44.32
47500	980	31.98	993	33.89	1006	35.81	1019	37.71	1032	39.69	1044	41.65	1057	43.69	1070	45.71	1082	47.69
50000	1017	34.97	1029	36.92	1042	38.94	1054	40.94	1067	43.02	1079	45.07	1091	47.08	1103	49.17	1115	51.32
52500	1055	38.21	1067	40.27	1078	42.30	1090	44.40	1102	46.46	1113	48.59	1125	50.79	1137	52.94	1148	55.03
55000	1093	41.65	1105	43.82	1116	45.94	1127	48.01	1138	50.28	1149	52.49	1160	54.63	1171	56.84	1182	59.11
Total Static Pressure																		
CFM	5.00		5.25		5.50		5.75		6.00		6.25		6.50		6.75		7.00	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25000																		
27500																		
30000	910	30.00	928	31.64	944	33.21												
32500	931	32.32	948	34.03	963	35.68	980	37.42	995	39.08	1010	40.81	1026	42.64				
35000	954	34.78	969	36.43	985	38.25	1000	39.99	1015	41.81	1029	43.52	1044	45.42	1058	47.19	1073	49.04
37500	979	37.42	994	39.18	1009	41.03	1022	42.77	1037	44.70	1051	46.50	1066	48.50	1080	50.35	1094	52.28
40000	1005	40.12	1019	42.01	1034	43.98	1048	45.84	1062	47.77	1075	49.68	1089	51.67	1102	53.62	1116	55.65
42500	1033	43.10	1048	45.13	1061	47.03	1074	49.02	1088	51.08	1100	52.99	1113	54.98	1126	57.04	1140	59.18
45000	1064	46.43	1077	48.40	1090	50.45	1102	52.35	1115	54.56	1128	56.60	1140	58.72	1152	60.64	1165	62.91
47500	1094	49.75	1107	51.88	1119	53.85	1131	56.01	1144	58.25	1156	60.30	1168	62.42	1180	64.61	1192	66.88
50000	1127	53.44	1139	55.62	1150	57.75	1162	59.95	1174	62.08	1185	64.28	1196	66.39				
52500	1159	57.19	1171	59.41	1182	61.71	1194	63.94										
55000	1194	61.46																

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