



**Tranquility 20™
Single-Stage (TS) Series
Submittal Data**
Models TSD/H/V 018 - 070
60Hz - R410A
English Language/I-P Units



Rev.: 08/15/05D



SUBMITTAL DATA

Unit Designation: _____
 Job Name: _____
 Architect: _____
 Engineer: _____
 Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ Btuh
 EER: _____
 Heating Capacity: _____ Btuh
 COP: _____
 Ambient Air Temp: _____ °F
 Entering Water Temp (Cig): _____ °F
 Entering Water Temp (Htg): _____ °F
 Entering Air Temp: _____ °F
 Airflow: _____ CFM
 Operating Weight: _____ (lb)

ELECTRICAL DATA

Power Supply: _____ Volts Phase _____ Hz
 Minimum Circuit Ampacity: _____
 Maximum Overcurrent Protection: _____

ClimateMaster reserves the right to change without notice. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster Customer Service Department at 1-800-362-2222 for specific information on the current design and specifications. Comments and other markups cannot be printed and are not included in the printer version of any documents on the website, but are visible in Acrobat Reader and other PDF viewers. The latest version of this document is available at www.climatemaster.com.

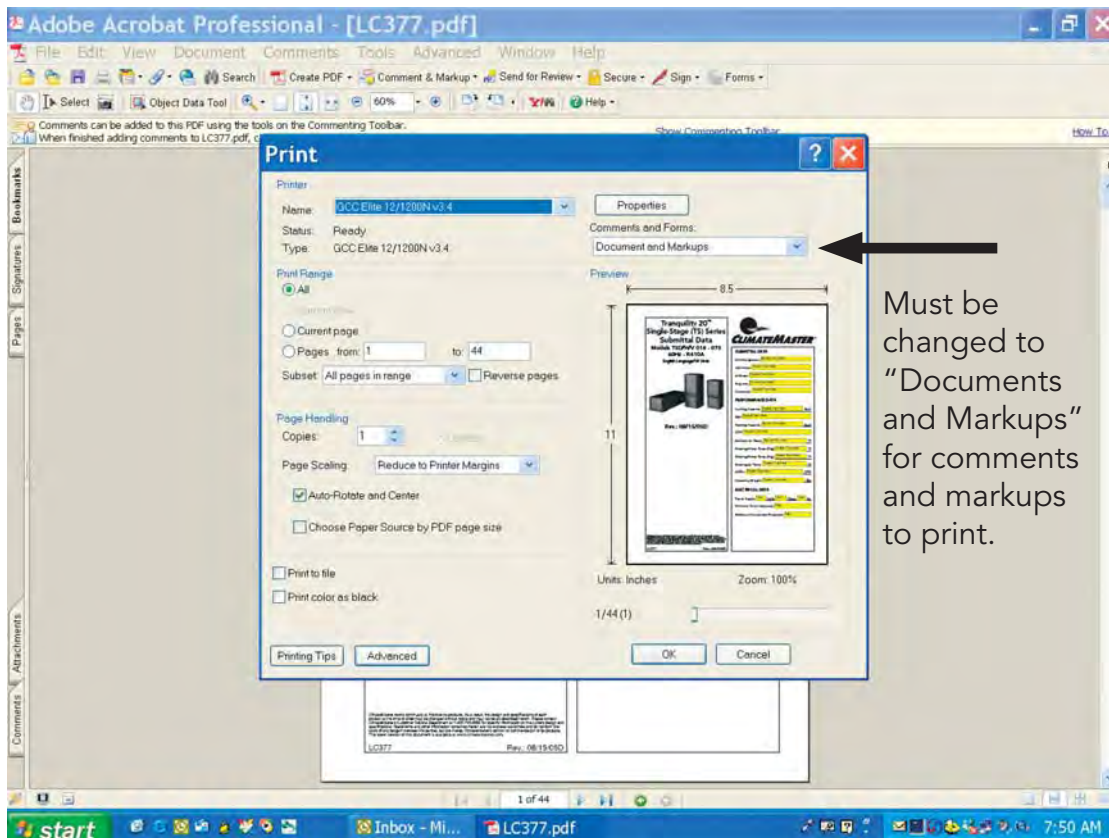
LC377 Rev.: 08/15/05D

Quick Start

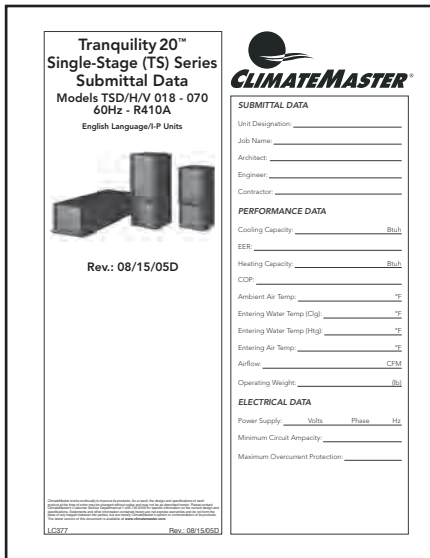
ClimateMaster has recently added new functionality to our equipment submittal sets. These new features add more detailed mark-ups, selections, and easier commenting. To access these new features, you will need to do the following.

1. You must have **Acrobat Reader 7®** installed on your computer. You can download the current version free at www.adobe.com.
2. The document must be downloaded to your computer. The comment features will not function in your web browser.
3. When printing the document, you must select **"Document and Markups"** from the **"Comments and Forms"** menu on the print window. Any markups or comments will not appear in the printer version if this is not selected.

For more detailed instructions, please consult the remainder of this document.



The screenshot shows the Adobe Acrobat Professional interface with the 'Print' dialog box open. The 'Printer' is set to 'GCC Elite 12/1200N v3.4'. In the 'Comments and Forms' section, the dropdown menu is set to 'Document and Markups', which is highlighted by a black arrow. The 'Print Range' is set to 'All'. The 'Page Handling' section shows 'Copies: 1' and 'Page Scaling: Reduce to Printer Margins'. The 'Print' button is visible at the bottom of the dialog box. A text box on the right side of the screenshot contains the instruction: 'Must be changed to "Documents and Markups" for comments and markups to print.'



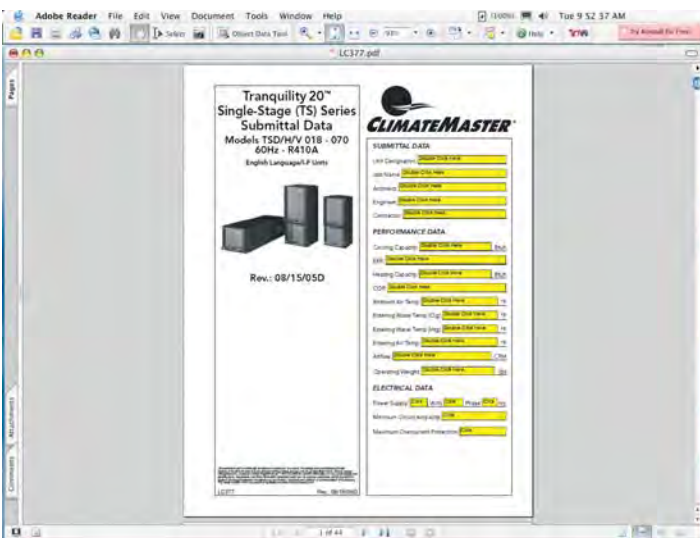
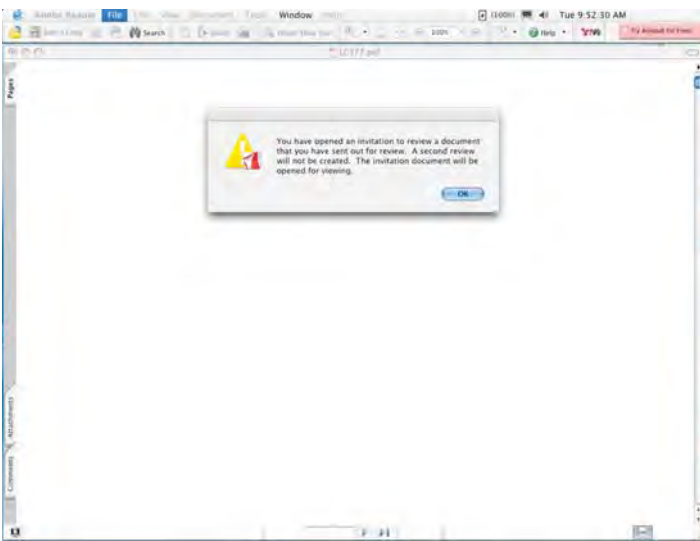
Step-By-Step Instructions

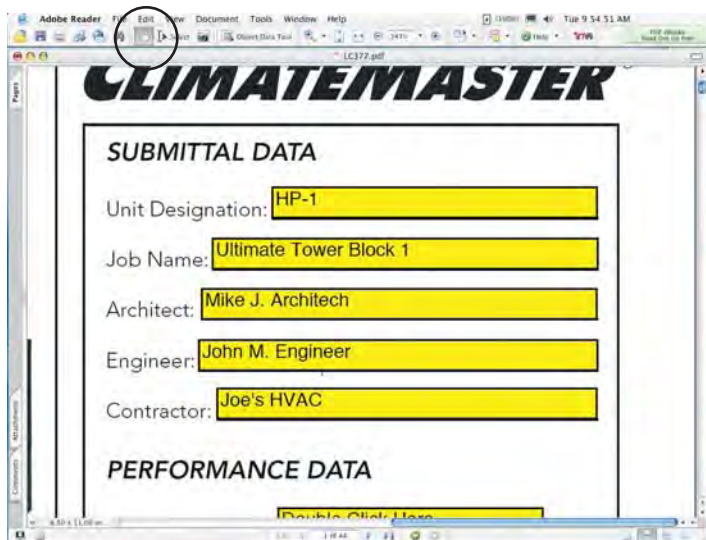
ClimateMaster has recently added new functionality to our equipment submittal sets. These new features add more detailed mark-ups, selections, and easier commenting. To access these new features, you will need to download and install Adobe Acrobat Reader 7® from www.adobe.com, or have the full version of Adobe Acrobat®.

The following are a set of quick instructions on how to use some of these new features.

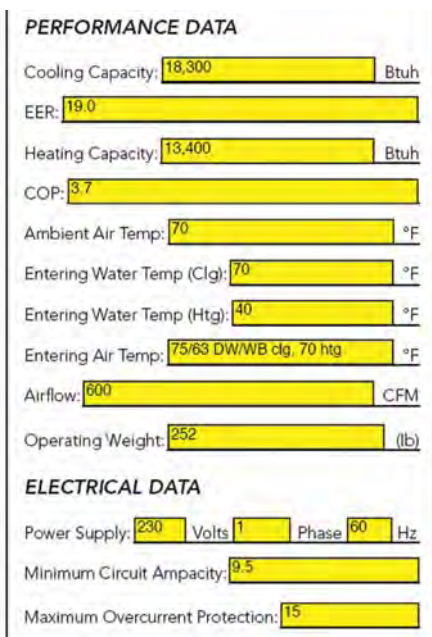
To begin, you must download the submittal file to your desktop. The advanced commenting features will not work if you open the file in your web browser. After you have downloaded the submittal file from www.climatemaster.com, open Acrobat Reader 7®. From the "File" menu, select "Open" and open the submittal file. All submittal sets are named by their ClimateMaster part number. In this example, the TS Series Submittal, the file name is LC377.pdf. When the file first opens, click "Ok" on the warning window. This is simply a reminder that there are extended features available in this file that is usually not found in other .pdf files.

The submittal will first open up to the title page. Here you can add more detailed unit and project information that was not available in previous versions. Please note, the following features will not show on a printed copy unless, in the print window under "Comments and Forms" you select "Document and Markups".

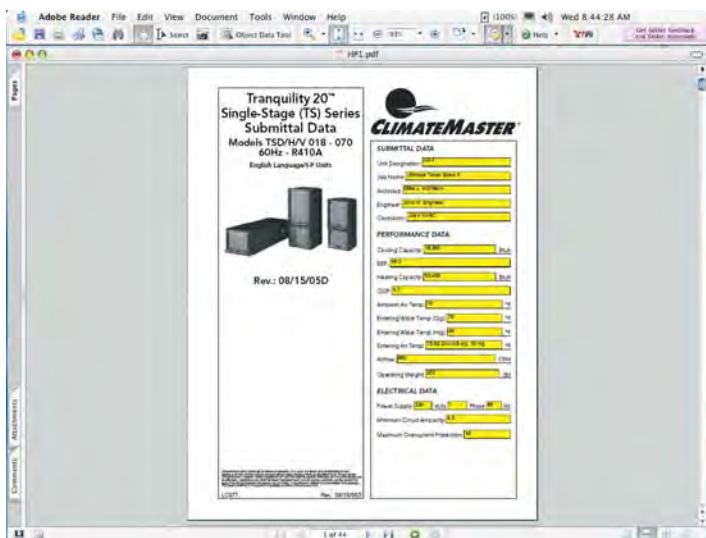




Select the hand tool from the menu bar, and then double click in the text field you wish to type in. You can also click once on the text field and delete the field if you don't wish to use it and may want to write in that field if you print the submittal out.

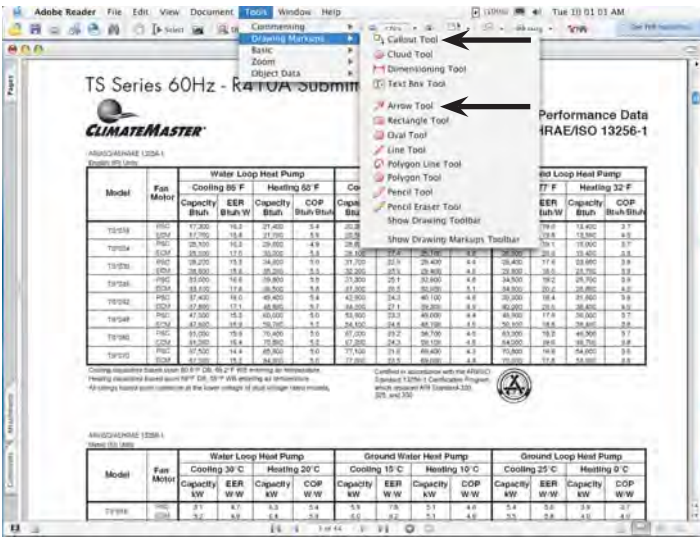


In addition to the unit and project information section, there's also a design and performance area. Again, double click in the text field you wish to type in.

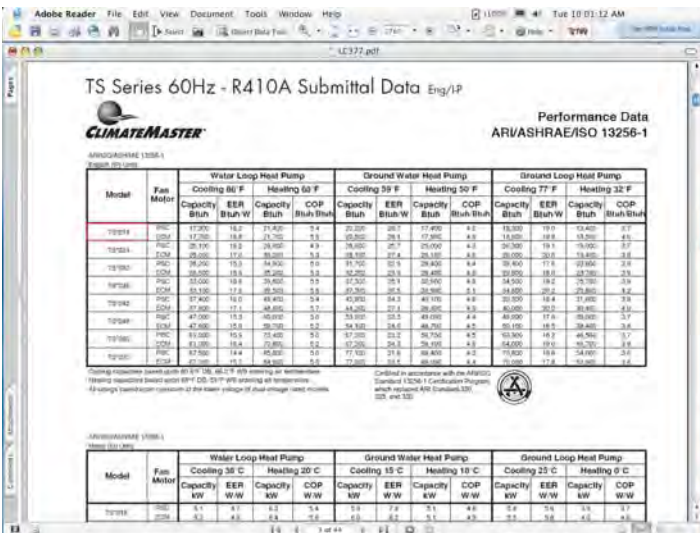


After you fill out the cover page, it is recommended that you save the file. From the "File" menu select "Save As" and name the file something that either relates to your project, or something that's easy to remember. It's also recommended to save the file often to avoid any chances to lose previous work.

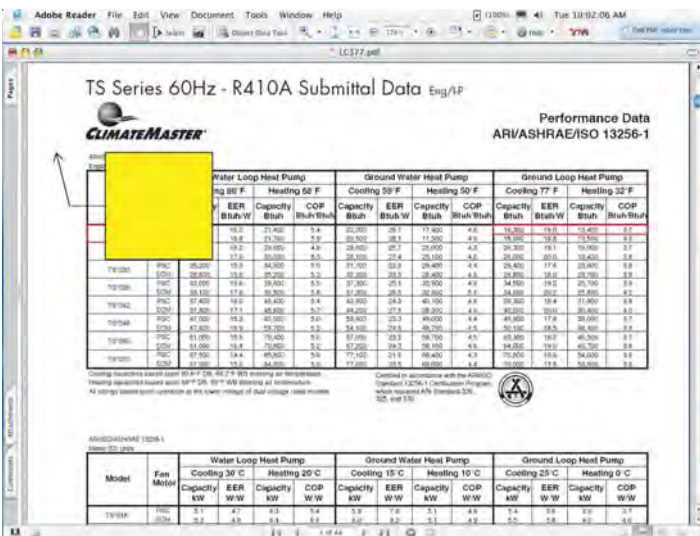
CLIMATEMASTER WATER-SOURCE HEAT PUMPS



When making a selection in a table there are two basic tools that you'll use. From the "Tools" menu, from the "Drawing Markups" tab, you can select the "Rectangle Tool" or the "Call Out" tool.



Using the "Rectangle Tool", draw a selection around the unit, performance, or other information pertaining to your selection. You can make multiple selections within the tables throughout the document.



Using the "Call Out Tool", click next to the area you wish to make a text note. The text box can be sized to fit your needs and moved to anywhere on the page. Additionally, the arrow tail can be moved and positioned to wherever you need it.

An example of a ISO Performance selection.

TS Series 60Hz - R410A Submittal Data Eng/JP
CLIMATEMASTER
 Performance Data
 AR/ASHRAE/ISO 13256-1

Model	Fan Motor	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
		Cooling BtU/h	EER	Heating 52 F BtU/h	COP	Cooling BtU/h	EER	Heating 50 F BtU/h	COP	Cooling BtU/h	EER	Heating 32 F BtU/h	COP
TS20H	250	17,420	10.2	27,420	5.4	22,300	10.7	37,400	4.8	12,800	10.8	23,420	5.2
TS20H	250	17,220	10.8	27,700	5.2	22,500	10.2	37,500	4.9	13,000	11.2	23,500	5.1
TS24H	300	26,000	11.8	40,000	5.3	28,100	11.4	52,100	4.8	20,000	11.8	36,000	5.1
TS24H	300	25,800	12.2	40,500	5.1	28,300	11.0	52,300	4.9	20,200	12.2	36,200	5.0
TS28H	350	38,000	13.0	58,000	5.2	37,200	12.3	72,000	4.8	28,000	13.0	52,000	5.1
TS28H	350	37,800	13.4	58,500	5.0	37,400	11.8	72,200	4.9	28,200	13.4	52,200	5.0
TS32H	400	50,000	13.8	78,000	5.1	48,500	12.6	95,000	4.8	38,000	13.8	68,000	5.1
TS32H	400	49,800	14.2	78,500	4.9	48,700	12.2	95,200	4.9	38,200	14.2	68,200	5.0
TS36H	450	65,000	14.2	100,000	5.0	63,500	12.4	125,000	4.8	50,000	14.2	90,000	5.1
TS36H	450	64,800	14.6	100,500	4.8	63,700	12.0	125,200	4.9	50,200	14.6	90,200	5.0
TS40H	500	85,000	14.4	130,000	5.0	83,500	12.2	165,000	4.8	65,000	14.4	120,000	5.1
TS40H	500	84,800	14.8	130,500	4.8	83,700	11.8	165,200	4.9	65,200	14.8	120,200	5.0

Cooling capacities based upon 80°F DB, 67°F WB entering air conditions.
 Heating capacities based upon 32°F DB, 60°F WB entering air conditions.
 All ratings based upon conditions at the given amount of total voltage input shown.

The same features and tools used in the ISO Performance selection are used in selecting the Unit Performance parameters.

TS Series 60Hz - R410A Submittal Data Eng/JP
CLIMATEMASTER
 Performance Data
 TS H/V/D 018 (PSC Blower)

EWT °F	GPM	WPD PSI	FT	Cooling - EAT 80/57°F							Heating - EAT 70/37°F						
				TC	SC	SHR	HR	EER	HC	KW	HE	LAT	COOP				
20	5.5	2.9	2.3	Operation not recommended													
22	5.7	3.1	2.5	18.1	11.3	0.51	0.74	12.7	30.8	400	11.8	1.21	7.2	24	2.57		
24	5.9	3.3	2.7	20.0	12.0	0.49	0.76	12.7	30.8	400	12.0	1.26	7.5	25	2.60		
26	6.1	3.5	2.9	22.0	12.8	0.47	0.78	12.7	30.8	400	12.2	1.31	7.8	26	2.63		
28	6.3	3.7	3.1	24.0	13.6	0.45	0.80	12.7	30.8	400	12.4	1.36	8.1	27	2.67		
30	6.5	3.9	3.3	26.0	14.4	0.43	0.82	12.7	30.8	400	12.6	1.41	8.4	28	2.70		
32	6.7	4.1	3.5	28.0	15.2	0.41	0.84	12.7	30.8	400	12.8	1.46	8.7	29	2.73		
34	6.9	4.3	3.7	30.0	16.0	0.39	0.86	12.7	30.8	400	13.0	1.51	9.0	30	2.76		
36	7.1	4.5	3.9	32.0	16.8	0.37	0.88	12.7	30.8	400	13.2	1.56	9.3	31	2.79		
38	7.3	4.7	4.1	34.0	17.6	0.35	0.90	12.7	30.8	400	13.4	1.61	9.6	32	2.82		
40	7.5	4.9	4.3	36.0	18.4	0.33	0.92	12.7	30.8	400	13.6	1.66	9.9	33	2.85		
42	7.7	5.1	4.5	38.0	19.2	0.31	0.94	12.7	30.8	400	13.8	1.71	10.2	34	2.88		
44	7.9	5.3	4.7	40.0	20.0	0.29	0.96	12.7	30.8	400	14.0	1.76	10.5	35	2.91		
46	8.1	5.5	4.9	42.0	20.8	0.27	0.98	12.7	30.8	400	14.2	1.81	10.8	36	2.94		
48	8.3	5.7	5.1	44.0	21.6	0.25	1.00	12.7	30.8	400	14.4	1.86	11.1	37	2.97		
50	8.5	5.9	5.3	46.0	22.4	0.23	1.02	12.7	30.8	400	14.6	1.91	11.4	38	3.00		
52	8.7	6.1	5.5	48.0	23.2	0.21	1.04	12.7	30.8	400	14.8	1.96	11.7	39	3.03		
54	8.9	6.3	5.7	50.0	24.0	0.19	1.06	12.7	30.8	400	15.0	2.01	12.0	40	3.06		
56	9.1	6.5	5.9	52.0	24.8	0.17	1.08	12.7	30.8	400	15.2	2.06	12.3	41	3.09		
58	9.3	6.7	6.1	54.0	25.6	0.15	1.10	12.7	30.8	400	15.4	2.11	12.6	42	3.12		
60	9.5	6.9	6.3	56.0	26.4	0.13	1.12	12.7	30.8	400	15.6	2.16	12.9	43	3.15		
62	9.7	7.1	6.5	58.0	27.2	0.11	1.14	12.7	30.8	400	15.8	2.21	13.2	44	3.18		
64	9.9	7.3	6.7	60.0	28.0	0.09	1.16	12.7	30.8	400	16.0	2.26	13.5	45	3.21		
66	10.1	7.5	6.9	62.0	28.8	0.07	1.18	12.7	30.8	400	16.2	2.31	13.8	46	3.24		
68	10.3	7.7	7.1	64.0	29.6	0.05	1.20	12.7	30.8	400	16.4	2.36	14.1	47	3.27		
70	10.5	7.9	7.3	66.0	30.4	0.03	1.22	12.7	30.8	400	16.6	2.41	14.4	48	3.30		
72	10.7	8.1	7.5	68.0	31.2	0.01	1.24	12.7	30.8	400	16.8	2.46	14.7	49	3.33		
74	10.9	8.3	7.7	70.0	32.0	0.00	1.26	12.7	30.8	400	17.0	2.51	15.0	50	3.36		
76	11.1	8.5	7.9	72.0	32.8	0.00	1.28	12.7	30.8	400	17.2	2.56	15.3	51	3.39		
78	11.3	8.7	8.1	74.0	33.6	0.00	1.30	12.7	30.8	400	17.4	2.61	15.6	52	3.42		
80	11.5	8.9	8.3	76.0	34.4	0.00	1.32	12.7	30.8	400	17.6	2.66	15.9	53	3.45		
82	11.7	9.1	8.5	78.0	35.2	0.00	1.34	12.7	30.8	400	17.8	2.71	16.2	54	3.48		
84	11.9	9.3	8.7	80.0	36.0	0.00	1.36	12.7	30.8	400	18.0	2.76	16.5	55	3.51		
86	12.1	9.5	8.9	82.0	36.8	0.00	1.38	12.7	30.8	400	18.2	2.81	16.8	56	3.54		
88	12.3	9.7	9.1	84.0	37.6	0.00	1.40	12.7	30.8	400	18.4	2.86	17.1	57	3.57		
90	12.5	9.9	9.3	86.0	38.4	0.00	1.42	12.7	30.8	400	18.6	2.91	17.4	58	3.60		
92	12.7	10.1	9.5	88.0	39.2	0.00	1.44	12.7	30.8	400	18.8	2.96	17.7	59	3.63		
94	12.9	10.3	9.7	90.0	40.0	0.00	1.46	12.7	30.8	400	19.0	3.01	18.0	60	3.66		
96	13.1	10.5	9.9	92.0	40.8	0.00	1.48	12.7	30.8	400	19.2	3.06	18.3	61	3.69		
98	13.3	10.7	10.1	94.0	41.6	0.00	1.50	12.7	30.8	400	19.4	3.11	18.6	62	3.72		
100	13.5	10.9	10.3	96.0	42.4	0.00	1.52	12.7	30.8	400	19.6	3.16	18.9	63	3.75		

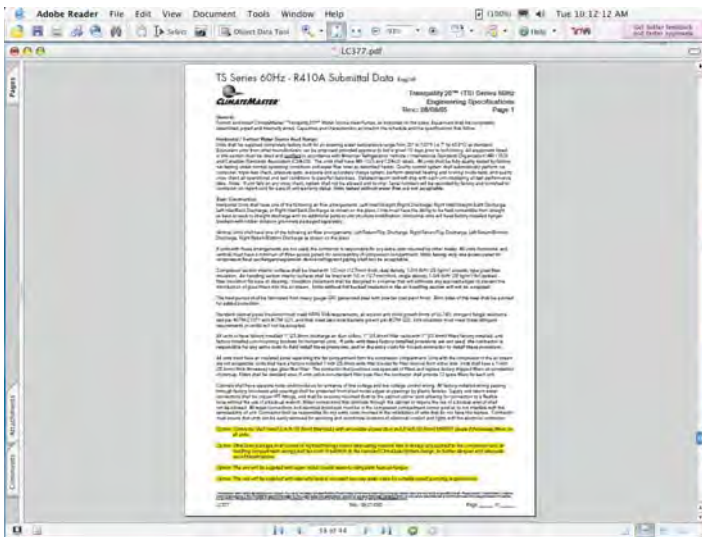
An example of a Unit Performance selection.

TS Series 60Hz - R410A Submittal Data Eng/JP
CLIMATEMASTER
 Performance Data
 TS H/V/D 018 (PSC Blower)

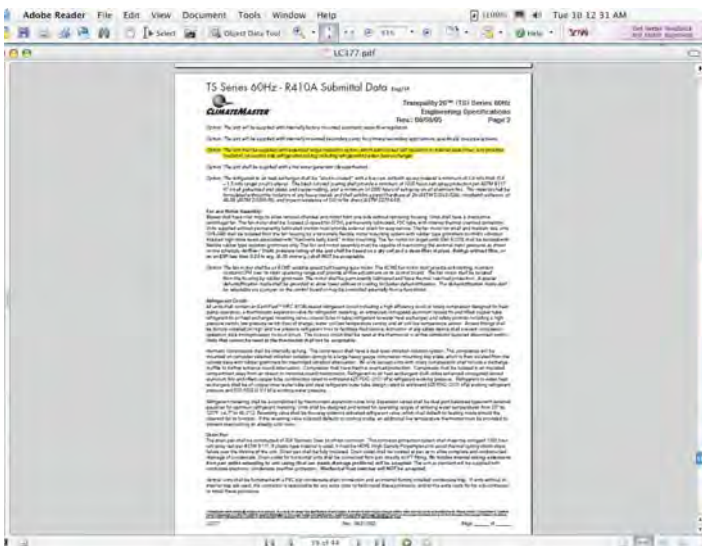
EWT °F	GPM	WPD PSI	FT	Cooling - EAT 80/57°F							Heating - EAT 70/37°F						
				TC	SC	SHR	HR	EER	HC	KW	HE	LAT	COOP				
20	5.5	2.9	2.3	Operation not recommended													
22	5.7	3.1	2.5	18.1	11.3	0.51	0.74	12.7	30.8	400	11.8	1.21	7.2	24	2.57		
24	5.9	3.3	2.7	20.0	12.0	0.49	0.76	12.7	30.8	400	12.0	1.26	7.5	25	2.60		
26	6.1	3.5	2.9	22.0	12.8	0.47	0.78	12.7	30.8	400	12.2	1.31	7.8	26	2.63		
28	6.3	3.7	3.1	24.0	13.6	0.45	0.80	12.7	30.8	400	12.4	1.36	8.1	27	2.67		
30	6.5	3.9	3.3	26.0	14.4	0.43	0.82	12.7	30.8	400	12.6	1.41	8.4	28	2.70		
32	6.7	4.1	3.5	28.0	15.2	0.41	0.84	12.7	30.8	400	12.8	1.46	8.7	29	2.73		
34	6.9	4.3	3.7	30.0	16.0	0.39	0.86	12.7	30.8	400	13.0	1.51	9.0	30	2.76		
36	7.1	4.5	3.9	32.0	16.8	0.37	0.88	12.7	30.8	400	13.2	1.56	9.3	31	2.79		
38	7.3	4.7	4.1	34.0	17.6	0.35	0.90	12.7	30.8	400	13.4	1.61	9.6	32	2.82		
40	7.5	4.9	4.3	36.0	18.4	0.33	0.92	12.7	30.8	400	13.6	1.66	9.9	33	2.85		
42	7.7	5.1	4.5	38.0	19.2	0.31	0.94	12.7	30.8	400	13.8	1.71	10.2	34	2.88		
44	7.9	5.3	4.7	40.0	20.0	0.29	0.96	12.7	30.8	400	14.0	1.76	10.5	35	2.91		
46	8.1	5.5	4.9	42.0	20.8	0.27	0.98	12.7	30.8	400	14.2	1.81	10.8	36	2.94		
48	8.3	5.7	5.1	44.0	21.6	0.25	1.00	12.7	30.8	400	14.4	1.86	11.1	37	2.97		
50	8.5	5.9	5.3	46.0	22.4	0.23	1.02	12.7	30.8	400	14.6	1.91	11.4	38	3.00		
52	8.7	6.1	5.5	48.0	23.2	0.21	1.04	12.7	30.8	400	14.8	1.96	11.7	39	3.03		
54	8.9	6.3	5.7	50.0	24.0	0.19	1.06	12.7	30.8	400	15.0	2.01	12.0	40	3.06		
56	9.1	6.5	5.9	52.0	24.8	0.17	1.08	12.7</									



In the Engineering Specification Section, you can highlight text to either select unit options, or highlight job specific features. From the "Tools" menu, "Commenting" tab, select the "Highlight Text Tool".

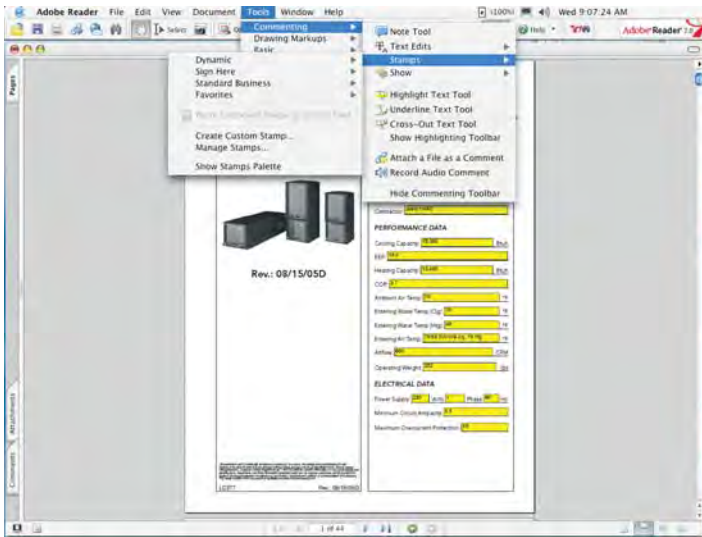


To highlight text, place your cursor at the beginning of the section, click and hold the mouse button while dragging across the text.

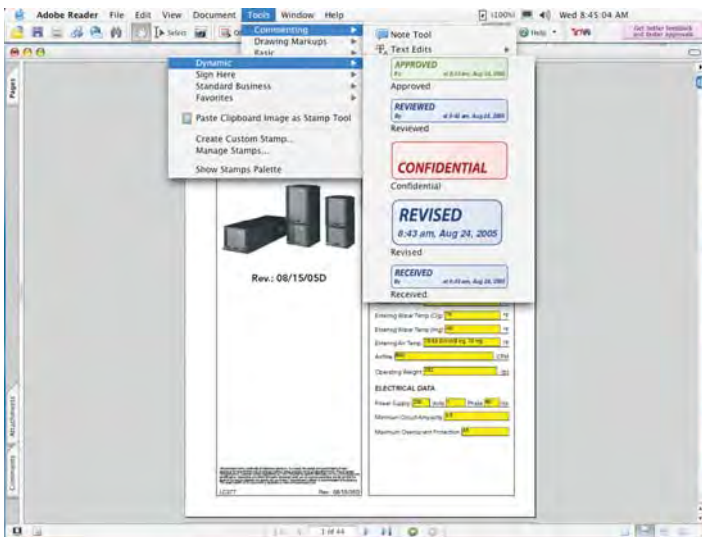


More examples of highlighted text.

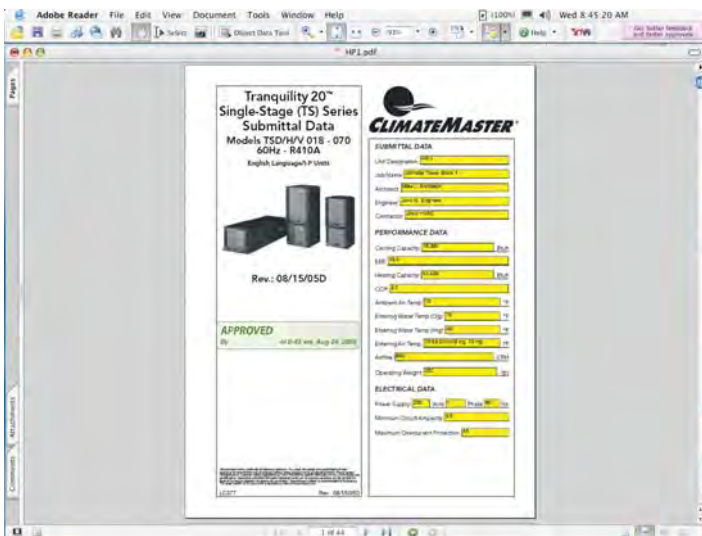
CLIMATEMASTER WATER-SOURCE HEAT PUMPS



An additional tool that's at your disposal is the "Stamp" tool. The "Stamp" tool has notes and flags for highlighting the status of the document, or items that require attention.



Select the stamp from the menu and then place it where you want it to appear.



The stamp on the document.

**Tranquility 20™
Single-Stage (TS) Series
Submittal Data**

**Models TSD/H/V 018 - 070
60Hz - R410A**

English Language/I-P Units



Rev.: 08/15/05D



SUBMITTAL DATA

Unit Designation: _____
 Job Name: _____
 Architect: _____
 Engineer: _____
 Contractor: _____

PERFORMANCE DATA

Cooling Capacity: _____ Btuh
 EER: _____
 Heating Capacity: _____ Btuh
 COP: _____
 Ambient Air Temp: _____ °F
 Entering Water Temp (Clg): _____ °F
 Entering Water Temp (Htg): _____ °F
 Entering Air Temp: _____ °F
 Airflow: _____ CFM
 Operating Weight: _____ (lb)

ELECTRICAL DATA

Power Supply: _____ Volts _____ Phase _____ Hz
 Minimum Circuit Ampacity: _____
 Maximum Overcurrent Protection: _____

ClimateMaster works continually to improve its products. As a result, the design and specifications of each product at the time of order may be changed without notice and may not be as described herein. Please contact ClimateMaster's Customer Service Department at 1-800-743-0500 for specific information on the current design and specifications. Components and other information contained herein are not separate warranties and do not form the basis of any contract between the parties. We are hereby ClimateMaster's agent or contractor or its products. The latest version of this document is available at www.climatemaster.com.

LC377

Rev.: 08/15/05D

In addition to the features and tools shown here, there are several other tools available in Acrobat Reader®. The best way to find these tools and their uses is to experiment with the software and explore its features.

ClimateMaster recommends upgrading to the full version of Adobe Acrobat®. You can find either Acrobat Standard® or Acrobat Professional® at your local computer store or online retailer.

With the full version of Acrobat®, you can add additional pages, delete pages, or add additional functionality.

With the additional functionality, the submittal can be customized and e-mailed to the engineer for approval. The engineer can then indicate approval with his stamp and e-mail the submittal back. This will save hours at the copy machine and a lot of paper.