



RT-500 ROUND RETROFIT AIR TERMINAL UNIT

SPECIFIABLE FEATURES

- 22 ga. galvanized steel casing, mechanically sealed, low leakage construction.
- Readily installed into existing ductwork with minimal ductwork modifications.
- 3-beaded inlet connection tube for added rigidity and secure flex duct connections.
- Metal inlet flow sensor with extra balancing taps.
- Available with optional factory provided pneumatic, electric, DDC, or electronic controls.
- Externally accessible balancing taps.
- 20 ga. control mounting plate and enclosure are standard.

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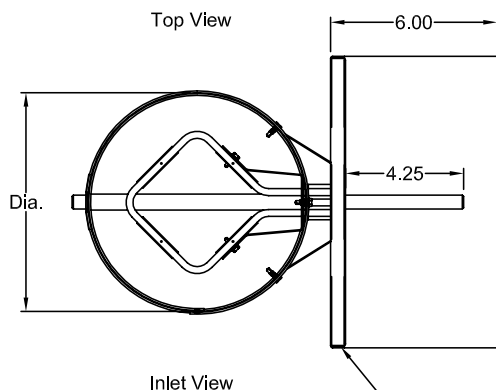
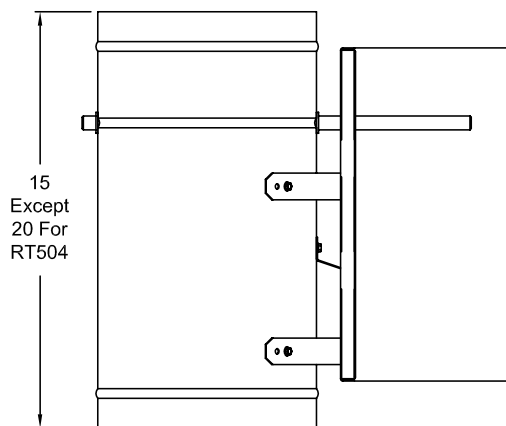


RT-500 ROUND RETROFIT AIR TERMINAL UNIT

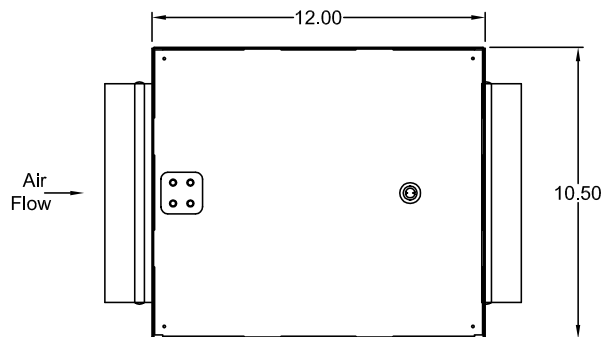
STANDARD FEATURES

- RT-500 is available in ten sizes from 6" to 16" to handle 30 CFM – 5,020 CFM.
- 22 ga. galvanized steel casing, mechanically sealed, low leakage construction.
- Mechanically fastened damper assembly is double layer, 18 gauge equivalent, galvanized steel with integral blade seal. (<1% at 3" static pressure).
- Optional factory calibrated job-specific controls.
- Multi-quadrant, averaging flow sensor for highly accurate (+/-5%) flow readings with varying inlet duct configurations after certified balancer has balanced terminal.
- Easily accessible, steel balancing taps.
- External control cabinet with offset mounting plate as standard.
- RT-500 has beaded inlet and discharge for added rigidity and aids in secure flex duct connections.

RT-500 ROUND RETROFIT



Control Panel [Std]
Shown With Cover



Side View
Cover Not Shown
In This View

Unit Size	Inlet Diameter	
	In.	mm
4	3.88	99
5	4.88	124
6	5.88	149
7	6.88	175
8	7.88	200
9	8.88	225
10	9.88	251
12	11.88	302
14	13.88	353
16	15.88	403

RT504 has a round 6" to 4" transition on the inlet.
An optional transition is available for the discharge end.

RADIATED SOUND MODEL RT

		OCTAVE BAND SOUND POWER, Lw, dB																																		
Unit Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.							ΔPs = 3.0 in. wg.												
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC						
4	50	0.01	41	32	19	19	15	7	<15	43	34	21	21	17	9	<15	44	35	22	22	18	11	<15	45	38	25	24	23	18	<15	45	38	25	24	23	18
	100	0.01	43	34	23	22	19	13	<15	45	36	25	24	21	15	<15	46	37	26	25	22	17	<15	47	40	29	27	27	24	<15	47	40	29	27	27	24
	150	0.03	46	38	29	26	21	16	<15	48	40	31	28	23	18	<15	49	41	32	29	24	20	<15	50	44	35	31	29	27	<15	50	44	35	31	29	27
	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	<15	52	44	38	32	26	22	<15	53	47	41	34	31	29	<15	53	47	41	34	31	29
	250	0.06	51	43	39	32	28	26	<15	53	45	41	34	30	28	<15	54	46	42	35	31	30	15	55	49	45	37	36	37	19	55	49	45	37	36	37
5	150	0.03	46	38	29	26	21	16	<15	48	40	31	28	23	18	<15	49	41	32	29	24	20	<15	50	44	35	31	29	27	<15	50	44	35	31	29	27
	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	<15	52	44	38	32	26	22	<15	53	47	41	34	31	29	<15	53	47	41	34	31	29
	250	0.06	51	43	39	32	28	26	<15	53	45	41	34	30	28	<15	54	46	42	35	31	30	15	55	49	45	37	36	37	19	55	49	45	37	36	37
	300	0.07	53	46	43	35	32	30	17	55	48	45	37	34	32	19	56	49	46	38	35	34	20	57	52	49	40	40	41	23	57	52	49	40	40	41
	350	0.08	54	48	45	38	35	31	19	56	50	47	40	37	33	20	57	51	47	41	38	35	22	58	54	50	43	43	42	25	58	54	50	43	43	42
6	200	0.04	49	41	35	29	23	18	<15	51	43	37	31	25	20	<15	52	44	38	32	26	22	<15	53	47	41	34	31	29	<15	53	47	41	34	31	29
	300	0.07	53	46	43	35	32	30	17	55	48	45	37	34	32	19	56	49	46	38	35	34	20	57	52	49	40	40	41	23	57	52	49	40	40	41
	400	0.08	55	50	46	41	38	32	20	57	52	48	43	40	34	22	58	53	49	44	41	36	23	59	56	52	46	46	43	26	59	56	52	46	46	43
	500	0.10	57	53	48	44	40	34	22	59	55	50	46	42	36	24	60	56	51	47	43	38	25	61	59	54	49	48	45	29	61	59	54	49	48	45
	600	0.18	58	55	50	46	42	36	24	60	57	52	48	44	38	26	61	58	53	49	45	40	27	62	61	56	51	50	47	31	62	61	56	51	50	47
7	350	0.01	51	40	33	25	20	19	<15	55	46	42	36	28	24	16	55	46	43	38	32	29	17	56	47	45	42	40	38	19	56	47	45	42	40	38
	450	0.01	52	41	34	27	22	19	<15	57	48	42	37	29	25	18	58	50	45	40	33	30	20	59	53	49	45	42	39	24	59	53	49	45	42	39
	550	0.01	53	42	35	29	24	20	<15	58	50	43	37	29	26	19	60	55	47	42	35	32	24	61	59	54	49	43	41	29	61	59	54	49	43	41
	650	0.01	55	45	38	34	26	20	<15	60	53	44	39	32	29	22	61	56	48	43	36	33	25	63	60	55	50	44	41	30	63	60	55	50	44	41
	750	0.01	57	47	41	36	28	21	17	62	54	46	41	34	29	24	63	58	50	45	38	34	27	65	62	57	52	45	42	32	65	62	57	52	45	42
8	400	0.01	52	41	34	26	21	19	<15	56	47	42	37	29	25	17	57	49	44	39	32	29	19	58	52	48	44	41	38	23	58	52	48	44	41	38
	550	0.01	53	42	35	29	24	20	<15	58	50	43	37	29	26	19	60	55	47	42	35	32	24	61	59	54	49	43	41	29	61	59	54	49	43	41
	700	0.01	56	46	40	35	27	21	17	61	53	45	40	33	28	23	62	57	49	44	37	33	26	64	61	56	51	44	41	31	64	61	56	51	44	41
	850	0.01	58	49	43	38	31	24	20	63	55	47	43	36	31	26	65	59	51	46	39	34	28	67	63	58	53	45	42	34	67	63	58	53	45	42
	1000	0.01	60	52	46	42	34	27	22	65	57	50	45	39	33	29	67	60	53	48	42	36	31	70	66	60	54	47	42	37	70	66	60	54	47	42
9	500	0.01	45	42	33	25	22	20	<15	50	47	41	31	26	23	16	54	54	49	39	34	28	23	59	55	49	44	41	39	24	59	55	49	44	41	39
	700	0.01	48	47	39	32	27	22	<15	53	52	47	37	32	26	21	56	56	51	42	36	30	26	62	59	58	47	43	41	28	62	59	58	47	43	41
	900	0.01	49	49	41	35	29	23	16	54	54	48	40	34	28	22	57	57	52	44	38	31	27	64	64	58	51	46	43	37	64	64	58	51	46	43
	1100	0.02	51	50	44	38	30	24	18	55	55	49	41	35	29	24	58	58	52	44	38	32	27	65	68	61	53	48	47	39	65	68	61	53	48	47
	1300	0.03	54	53	46	40	32	26	23	58	57	50	42	36	30	26	62	61	53	46	40	34	31	70	69	62	55	49	48	40	70	69	62	55	49	48
10	700	0.01	48	47	39	32	27	22	15	53	52	47	38	32	26	21	56	56	51	42	36	30	26	62	59	58	47	43	41	28	62	59	58	47	43	41
	900	0.01	49	49	41	35	29	23	16	54	54	48	40	34	28	22	57	57	52	44	38	31	27	64	64	58	51	46	43	37	64	64	58	51	46	43
	1100	0.02	51	50	44	38	30	24	18	55	55	49	41	35	29	24	58	58	52	44	38	32	27	65	68	61	53	48	47	39	65	68	61	53	48	47
	1300	0.03	54	53	46	40	32	26	23	58	57	50	42	36	30	26	62	61	53	46	40	34	31	70	69	62	55	49	48	40	70	69	62	55	49	48
	1500	0.03	56	56	49	43	35	29	25	61	59	51	44	38	32	32	64	63	55	48	42	36	33	72	71	64	57	51	50	42	72	71	64	57	51	50
12	800	0.01	50	42	35	28	26	29	<15	54	48	45	36	32	32	19	57	51	49	40	35	35	23	58	56	56	50	46	47	31	58	56	56	50	46	47
	1200	0.01	51	45	39	32	29	30	16	56	50	48	39	35	34	23	59	54	51	43	38	37	26	61	61	60	53	47	48	35	61	61	60	53	47	48
	1600	0.01	54	48	46	39	33	32	20	58	53	51	42	38	37	25	61	56	54	45	41	40	29	65	65	63	55	49	48	38	65	65	63	55	49	48
	2000	0.02	56	52	51	43	39	37	25	61	55	53	45	42	40	27	62	58	56	47	44	42	31	66	67	64	56	50	49	39	66	67	64	56	50	49
	2400	0.03	57	52	44	36	38	38	20	62	58	56	48	45	43	31	65	61	59	51	48	46	34	69	68	67	60	54	51	43	69	68	67	60	54	51
14	1000	0.01	53	41	39	31	27	22	<15	55	43	41	33	29	24	16	56	43	41	33	30	24	17	57	45	43	35	31	26	18	57	45	43	35	31	26
	1600	0.01	56	46	44	35	31	26	18	58	48	46	37	33	28	20	58	49	46	38	33	28	20	60	50	48	39	35	30	22	60	50	48	39	35	30
	2100	0.02	59	54	51	42	36	31	25	61	56	53	44	38	33	27	62	57	54	45	39	34	29	63	58	55	46	40	35	30	63	58	55	46	40	35
	2600	0.03	62	56	54	43	40	36	29	64	58	56	45	42	38	31	65	59	57	46	43	39</														

DISCHARGE SOUND MODEL RT

OCTAVE BAND SOUND POWER, Lw, dB																														
Unit Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.							ΔPs = 3.0 in. wg.						
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC
4	50	0.01	67	57	40	37	33	26	23	70	63	57	51	41	33	27	71	64	56	51	42	33	29	73	66	55	53	44	35	31
	100	0.02	69	58	42	39	34	28	26	71	64	58	51	42	36	29	72	65	58	51	43	36	30	74	67	58	53	45	38	32
	150	0.03	71	59	44	41	35	30	29	72	65	59	52	44	38	30	73	66	59	52	45	38	31	75	68	59	54	47	40	34
	200	0.04	72	60	45	43	36	31	30	73	66	59	53	46	39	31	74	67	59	53	47	39	32	76	69	59	55	49	41	35
	250	0.06	74	61	48	44	38	33	32	74	67	60	53	47	42	32	75	68	61	53	48	42	34	77	70	63	55	50	44	36
5	150	0.03	71	59	44	41	35	30	29	72	65	59	52	44	38	30	73	66	59	52	45	38	31	75	68	59	54	47	40	34
	200	0.04	72	60	45	43	36	31	30	73	66	59	53	46	39	31	74	67	59	53	47	39	32	76	69	59	55	49	41	35
	250	0.06	74	61	48	44	38	33	32	74	67	60	53	47	42	32	75	68	61	53	48	42	34	77	70	63	55	50	44	36
	300	0.07	76	63	50	47	39	35	31	74	69	62	54	48	45	32	75	70	63	54	49	45	30	77	72	65	56	51	47	32
	350	0.09	77	64	51	48	40	36	32	75	70	63	55	49	46	33	76	71	64	55	50	46	31	78	73	66	57	52	48	33
6	200	0.02	68	57	43	42	35	31	25	69	63	57	52	45	39	26	70	64	57	52	46	39	27	72	66	57	54	48	41	30
	300	0.04	72	60	48	46	38	35	26	70	66	60	53	47	45	25	71	67	61	53	48	45	26	73	69	63	55	50	47	28
	400	0.08	73	65	53	51	42	40	27	71	67	61	54	48	49	26	72	68	62	54	49	49	27	74	70	64	56	51	51	29
	500	0.12	74	68	58	55	47	44	29	74	71	65	59	53	52	31	75	72	66	59	54	52	32	77	74	68	61	56	54	34
	600	0.15	76	72	62	59	51	48	32	75	73	67	63	56	53	33	76	74	68	63	57	53	34	78	76	70	65	59	55	37
7	350	0.04	68	60	50	45	39	34	21	72	67	60	55	50	46	26	71	66	61	56	53	48	25	73	67	62	57	57	52	27
	450	0.06	70	62	52	48	40	36	23	74	69	60	57	41	47	28	74	69	63	59	55	50	28	76	70	65	60	58	53	31
	550	0.08	72	65	55	52	43	39	26	76	71	62	59	53	48	31	76	71	65	61	56	51	31	78	72	67	62	59	54	34
	650	0.10	73	66	56	53	44	40	27	77	72	63	60	56	52	32	78	72	66	62	57	52	33	80	74	68	64	60	55	36
	750	0.12	75	68	58	56	46	41	28	78	73	65	62	60	57	33	79	74	67	63	60	57	35	81	76	69	65	62	58	37
8	400	0.05	69	61	51	47	39	35	22	73	68	59	56	40	46	27	73	68	62	58	54	49	27	75	69	64	59	57	52	30
	550	0.08	72	65	55	52	43	39	26	76	71	62	59	53	48	31	76	71	65	61	56	51	31	78	72	67	62	59	54	34
	700	0.10	74	67	57	55	45	40	29	77	72	64	61	59	56	32	78	73	66	62	59	56	34	80	75	68	64	61	57	36
	850	0.12	76	70	60	58	49	44	30	80	74	66	64	59	56	34	81	75	68	65	60	55	36	83	77	70	66	62	57	38
	1000	0.14	78	72	63	61	52	47	31	82	76	68	66	58	53	36	83	77	70	67	60	54	38	85	78	72	68	63	57	40
9	500	0.01	64	60	49	45	37	35	18	69	66	57	53	48	45	25	70	67	60	56	51	48	26	72	69	62	58	54	52	28
	700	0.01	67	63	52	48	40	38	20	71	69	59	55	50	47	27	72	69	62	58	53	50	28	74	71	64	60	56	54	31
	900	0.02	70	65	54	51	41	39	21	73	70	61	57	53	50	28	74	71	64	59	55	52	29	76	73	66	61	57	54	32
	1100	0.02	71	66	57	53	45	43	24	75	71	63	58	53	51	29	76	72	65	60	56	53	31	77	74	68	62	59	55	33
	1300	0.03	74	71	61	58	51	49	30	78	75	66	63	57	55	35	79	76	68	64	59	56	40	81	77	70	65	62	59	43
10	700	0.01	67	63	52	48	40	38	20	71	69	59	55	50	47	27	72	69	62	58	53	50	28	74	71	64	60	56	54	31
	900	0.02	70	65	54	51	41	39	21	73	70	61	57	53	50	28	74	71	64	59	55	52	29	76	73	66	61	57	54	32
	1100	0.02	71	66	57	53	45	43	24	75	71	63	58	53	51	29	76	72	65	60	56	53	31	77	74	68	62	59	55	33
	1300	0.03	74	71	61	58	51	49	30	78	75	66	63	57	55	35	79	76	68	64	59	56	40	81	77	70	65	62	59	43
	1500	0.03	76	73	63	60	53	51	32	80	77	68	65	59	57	36	81	78	70	66	61	58	38	83	79	72	67	64	61	39
12	800	0.01	61	54	46	43	39	33	<15	67	64	57	55	52	49	21	69	66	60	59	58	55	24	70	67	61	62	63	60	25
	1200	0.01	64	58	50	47	43	39	17	69	66	60	58	56	53	24	72	69	64	62	61	58	27	73	70	66	66	65	63	29
	1600	0.01	66	62	53	50	47	45	19	71	68	63	60	59	57	26	74	71	67	64	63	61	29	75	73	70	69	67	65	32
	2000	0.02	69	63	58	55	52	51	22	74	70	65	63	62	60	28	77	73	69	66	65	64	31	78	75	71	71	69	67	33
	2400	0.02	72	65	63	59	58	57	25	76	71	67	65	65	63	30	79	74	70	67	67	66	33	80	76	72	73	70	68	35
14	1000	0.50	68	57	52	46	40	39	18	63	60	55	51	48	45	16	63	60	56	52	49	46	16	64	62	59	58	50	49	19
	1600	0.01	75	70	65	61	57	50	28	67	65	66	59	55	49	22	67	65	67	60	56	50	22	68	67	70	66	57	53	25
	2100	0.01	76	71	68	63	60	54	29	70	69	73	63	58	53	27	70	69	74	64	59	54	27	71	71	77	70	60	57	31
	2600	0.01	77	75	69	65	61	57	34	76	75	76	67	63	57	34	76	75	77	68	64	58	34	77	77	80	74	65	61	37
	3100	0.04	81	76	73	69	63	61	36	83	78	78	72	67	61	38	84	79	80	74	69	63	39	85	81	83	80	70	66	41
16	1400	0.01	70	67	61	54	48	43	26	73	73	69	65	58	53	32	75	76	71	70	64	58	35	75	77	74	72	69	63	37
	2100	0.02	74	71	65	58	53	48	29	77	76	71	67	61	56	35	78	78	73	71	65	60	37	79	79	76	74	70	64	39
	2800	0.03	78	74	68	62	57	53	33	80	78	73	68	63	58	38	81	79	75	71	66	61	39	83	81	77	76	71	65	41
	3500	0.04	78	75	71	64	59	56	34	81	78	74	69	64	60	38	82	80	76	72	67	63	40	84	82	79	76	72	66	42
	4200	0.06	81	77	75	68	62	59	37	84	80	77	73	68	64	40	84	80	77	75	69	65	40	85	83	80	77	73	68	44

1) Discharge sound is noise emitted from unit discharge into downstream ductwork
 2) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
 3) Min ΔPs is the min. operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
 4) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017

5) NC values are calculated using attenuation credits outlined in AHRI 885-2008 Appendix E
 6) Blank spaces indicate Minimum Ps if unit exceeds the ΔPs across the unit
 7) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017

RT-500 CONTROL SEQUENCE OFFERINGS



PPD-PNEUMATIC PRESSURE DEPENDENT

- 610N Direct Acting / Normally Closed (DA / NC)
- 612N Reverse Acting / Normally Open (RA / NO)



PPI-PNEUMATIC PRESSURE INDEPENDENT

- 614M Direct Acting / Normally Closed (DA / NC)
- 615M Direct Acting / Normally Open (DA / NO)
- 616M Reverse Acting / Normally Closed (RA / NC)
- 617M Reverse Acting / Normally Open (RA / NO)
- 640M Static Pressure Control



EPD-ELECTRIC PRESSURE DEPENDENT

- 652 Cooling Only
- 653 Cooling with Reheat
- 656 Static Control
- 657 Actuator Only



API-ANALOG PRESSURE INDEPENDENT

- 660 Cooling Only
- 661 Cooling with Heat
- 664 Night Setback / Morning Warm-up
- 665 Heating / Cooling Changeover
- 673 Static Pressure Control



DDC-DIRECT DIGITAL CONTROL

- BACnet
- 690 Cooling Only
 - 691 Cooling or Heating
 - 692 Hot Water Reheat
 - 693-E Electric Reheat

Refer to page ACC-24 for a complete description of all control sequences