

The radiated and discharge sound power levels of each unit at varying air flow rates and inlet static pressures are shown in the performance data tables. Disregarding other factors and/or equipment that could contribute to the noise in the occupied space, these ratings along with the acoustical environment in which the unit operates, will determine the perceived noise level.

Noise generated within the terminal and emitted through the discharge air (discharge sound) will be attenuated by any ductwork downstream of the terminal. The noise emitted through the casing of the terminal (radiated sound) will be attenuated by the room's ceiling. Depending upon the application, either the radiated or discharge noise level will be the relative higher and determine the perceived noise level in the occupied space. The occupied space itself will provide further attenuation depending on the acoustical characteristics of the walls, ceilings, floors and internal furnishings.

All manufacturers must make certain assumptions on the acoustical environment of the application and then apply these assumptions to the unit's sound power ratings to determine the resultant sound pressures and perceived noise level in the occupied space. While the ARI sound power ratings have been certified and can accurately be compared from one manufacturer to another, the NC values predicted will be dependent upon the acoustical assumptions made.

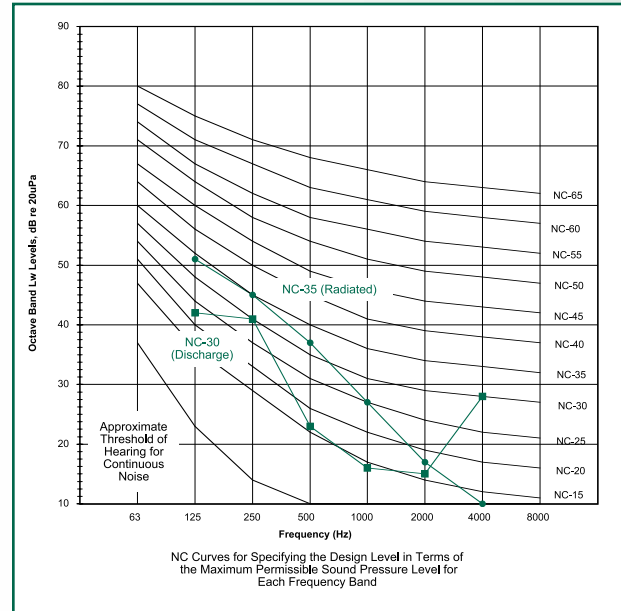
When selecting terminals, check the attenuation assumptions before comparing cataloged NC values. Anemostat uses the ARI Standard 885, Appendix E attenuation assumptions for determining the anticipated noise levels. The attenuation assumptions in this standard are shown in table 2.

Table 3: Typical NC Design Values

Hotel rooms	25 - 35
Offices and conference rooms	25 - 35
Open offices	30 - 40
Classrooms	35 - 40 (max)
Churches	25 - 35
Hospital wards	30 - 40
Gymnasiums	40 - 45
Libraries	30 - 40

The NC curves are intended to reflect a human's perceived noise comfort. Plotting the anticipated sound pressure by octave band and determining the tangent NC curve reached throughout all octave bands (using the acoustical assumptions) will indicate the NC value anticipated.

Example of NC Curve Plot



Radiated Lw @ 1800 cfm - 1.0" w.g. Inlet Ps								
	63	125	250	500	1000	2000	4000 8000	
Lw Data	-----	69	64	57	53	48	46	-----
Attenuation	-----	18	19	20	26	31	36	-----
Plotted Data	-----	51	45	37	27	17	10	-----
NC	-----	34	35	32	25	17	-----	-----

Discharge 1800 cfm @ 0.25" w.g. External Ps								
	63	125	250	500	1000	2000	4000 8000	
Lw Data	-----	71	71	64	67	67	67	-----
Attenuation	-----	29	30	41	51	52	39	-----
Plotted Data	-----	42	41	23	16	15	28	-----
NC	-----	22	30	16	-----	-----	30	-----

- Notes:**
1. Size 7512 QST (see tables 39 and 40)
 2. Radiated sound in the 250 Hz (third octave) is the controlling band

Table 2: ARI Attenuation Table

		Octave Band							
		2	3	4	5	6	7		
Radiated	All Sizes	2	1	0	0	0	0	Environmental Effect Type II Mineral Fiber	
		16	18	20	26	31	36	Total dB Reduction	
		18	19	20	26	31	36		
		Octave Band							
		2	3	4	5	6	7		
Discharge	Sizes 5-7 (300-700 cfm)	2	1	0	0	0	0	Environmental Effect 5 ft., Duct Lining (12x12) End Reflection	
		2	4	10	20	20	14	5 ft., 8 in. Flex Duct	
		9	5	2	0	0	0	Room Effect	
		6	10	18	20	21	12	Sound Power Division	
		5	6	7	8	9	10	Total dB Reduction	
		3	3	3	3	3	3		
		27	29	40	51	53	39		
		Octave Band							
		2	3	4	5	6	7		
Discharge	Sizes 8-16x24 (>700 cfm)	2	1	0	0	0	0	Environmental Effect 5 ft., Duct Lining (15x15) End Reflection	
		2	3	9	18	17	12	5 ft., 8 in. Flex Duct	
		9	5	2	0	0	0	Room Effect	
		6	10	18	20	21	12	Sound Power Division	
		5	6	7	8	9	10	Total dB Reduction	
		5	5	5	5	5	5		
		29	30	41	51	52	39		

Table 53: NC Values

Casing Size	Inlet Size	Airflow (CFM)	Primary NC Values							
			Radiated				Discharge			
			0.5"ΔPS	1.0"ΔPS	2.0"ΔPS	3.0"ΔPS	0.5"ΔPS	1.0"ΔPS	2.0"ΔPS	3.0"ΔPS
1	6	200	---	---	24	25	---	---	---	---
		250	---	21	25	27	---	---	---	---
		300	---	22	26	29	---	---	---	---
		350	---	22	27	31	---	---	21	22
		400	20	25	29	31	---	---	22	24
		450	21	26	29	32	---	---	24	26
	7	250	---	---	24	26	---	---	---	---
		300	---	21	25	29	---	---	---	---
		400	---	22	27	30	---	---	20	20
		500	20	24	29	31	---	---	21	24
		600	23	26	29	32	---	---	22	25
		675	24	29	31	33	---	20	24	26
	8	350	---	20	27	30	---	---	20	22
		475	---	21	29	33	---	---	24	25
		600	---	22	29	34	---	---	25	27
		700	21	25	30	34	---	20	26	29
		800	25	26	31	34	---	21	25	29
		900	27	29	33	35	---	22	26	30
9	450	---	21	29	31	---	---	---	20	
	525	---	21	29	33	---	---	20	21	
	600	---	21	29	34	---	---	21	22	
	700	---	22	29	34	---	---	21	24	
	900	21	25	31	34	---	---	22	25	
	1100	25	27	32	36	---	21	25	27	
2	9	450	---	20	27	30	---	---	21	22
		525	---	20	29	33	---	---	22	24
		600	---	21	29	34	---	---	22	25
		700	---	22	30	34	---	---	24	26
		900	20	24	31	34	---	---	25	27
		1100	25	26	32	36	---	20	26	30
	10	550	---	20	29	32	---	---	---	20
		675	---	21	29	33	---	---	21	22
		800	---	21	29	33	---	---	21	24
		1000	---	22	30	34	---	---	22	26
		1200	21	24	30	35	---	---	22	27
		1400	24	27	31	35	---	---	22	27
	12	800	---	21	29	31	---	---	20	20
		1000	---	21	30	33	---	---	21	22
		1200	---	22	30	34	---	---	21	26
		1400	---	24	31	35	---	---	22	27
		1700	21	25	31	37	---	---	24	29
		2000	25	27	32	37	---	20	25	30
3	12	800	---	22	30	30	---	---	22	24
		1000	---	24	31	31	---	---	24	26
		1200	---	24	31	35	---	---	25	27
		1400	---	24	32	36	---	---	25	29
		1700	21	25	34	37	---	---	25	30
		2000	25	27	35	39	---	21	26	31
	14	1050	---	25	31	32	---	20	26	26
		1400	---	26	34	36	---	20	29	31
		1800	20	27	37	39	---	21	30	34
		2200	25	30	38	41	---	22	31	35
		2600	27	31	38	42	---	24	32	36
		3000	31	35	39	44	21	26	35	37
	16	1400	21	30	36	37	---	---	25	27
		1900	22	31	39	41	---	---	29	32
		2400	26	32	40	44	---	20	30	35
		2900	30	34	40	45	---	21	31	36
		3500	32	36	41	46	21	24	31	37
		4100	36	39	42	47	25	29	32	37

Fan Only NC Values						
Casing Size	Fan Assy.	Fan Flow (CFM)	Rad	Dis		
1	17	100	25	---		
		200	30	---		
		250	32	---		
		300	33	21		
		350	34	24		
		400	29	---		
	25	500	33	---		
		550	34	22		
		600	35	24		
		2	17	200	24	---
				250	27	---
				300	30	---
25	400		34	---		
	450		36	22		
	500		29	---		
3	25	600	30	---		
		700	31	---		
		900	33	---		
		50	600	29	---	
			700	31	---	
			800	32	---	
	1000		34	---		
	1200		36	20		
	3		50	800	32	---
		1000		35	---	
		1200		37	---	
		1400		39	---	
1600		41		22		
75		1200		36	---	
		1400	39	---		
		1600	41	---		
		1800	43	23		
		2000	45	26		
		10	1600	41	---	
1800			43	22		
2000	45		25			
2200	46		28			
2400	48		31			

Notes:
 1. NC values are calculated based on procedures outlined in ARI standard 885, appendix E as shown on pages B-9 and B-10
 2. Where no NC value is shown (---), NC values are less than 20

Table 2: ARI Attenuation Table

	Octave Band							
	2	3	4	5	6	7		
Radiated	2	1	0	0	0	0	Environmental Effect	
All Sizes	16	18	20	26	31	36	Type II Mineral Fiber	
	18	19	20	26	31	36	Total dB Reduction	
	Octave Band							
	2	3	4	5	6	7		
Discharge	2	1	0	0	0	0	Environmental Effect	
Sizes 5-7	2	4	10	20	20	14	5 ft., Duct Lining (12x12)	
(300-700 cfm)	9	5	2	0	0	0	End Reflection	
	6	10	18	20	21	12	5 ft., 8 in. Flex Duct	
	5	6	7	8	9	10	Room Effect	
	3	3	3	3	3	3	Sound Power Division	
	27	29	40	51	53	39	Total dB Reduction	
	Octave Band							
	2	3	4	5	6	7		
Discharge	2	1	0	0	0	0	Environmental Effect	
Sizes	2	3	9	18	17	12	5 ft., Duct Lining (15x15)	
8-16x24	9	5	2	0	0	0	End Reflection	
(>700 cfm)	6	10	18	20	21	12	5 ft., 8 in. Flex Duct	
	5	6	7	8	9	10	Room Effect	
	5	5	5	5	5	5	Sound Power Division	
	29	30	41	51	52	39	Total dB Reduction	

Table 55: Radiated & Discharge Fan Only Sound Power Data (dB)

Casing Size	Fan Assy.	Fan Flow (CFM)	Fan Only - Radiated					Fan Only - Discharge						
			2	3	4	5	6	7	2	3	4	5	6	7
1	17	100	59	56	48	41	37	32	53	54	44	42	37	33
		200	63	60	51	44	42	37	58	59	50	49	44	42
		300	65	62	56	46	45	40	63	63	53	52	48	47
		350	66	63	57	47	46	42	65	65	55	53	49	49
	25	300	58	56	48	42	38	31	54	53	47	48	41	38
		400	62	59	51	45	42	37	58	57	50	50	46	46
		500	65	62	53	48	45	42	62	61	54	53	50	52
		550	66	63	54	49	46	43	64	64	56	55	52	54
	600	70	64	55	50	47	44	66	65	58	57	54	56	
2	17	200	56	55	51	46	42	35	50	51	48	47	41	36
		250	61	58	54	50	47	41	55	55	50	48	43	41
		300	63	60	56	51	48	42	57	57	52	49	45	44
		400	67	63	58	55	52	47	62	61	54	51	49	48
		450	69	65	59	56	53	49	63	64	55	52	50	49
	25	400	54	58	50	46	42	36	47	51	48	48	41	38
		500	55	59	52	48	46	40	49	52	50	49	44	42
		600	57	60	53	50	48	43	51	53	52	50	46	45
		700	58	61	54	51	49	45	52	54	53	51	47	46
	50	900	62	62	58	56	54	52	57	58	57	53	52	51
		600	61	59	53	51	47	42	55	53	52	49	46	44
		700	62	61	54	52	49	45	56	54	53	50	48	44
		800	64	62	56	54	52	48	58	56	54	51	50	46
		1000	66	63	58	57	56	53	62	59	57	53	54	48
		1200	68	65	61	60	60	57	66	63	60	56	57	50
		1600	71	70	64	63	63	61	69	65	66	62	62	52
3	50	800	62	61	57	56	53	51	61	57	55	54	51	44
		1000	64	64	59	57	55	53	62	58	57	55	53	46
		1200	67	66	60	59	58	56	65	60	61	57	57	48
		1400	70	68	61	61	61	59	66	62	63	59	59	60
		1600	71	70	64	63	63	61	69	65	66	62	62	52
	75	1200	64	65	56	55	52	50	61	57	55	54	50	45
		1400	67	68	58	58	56	54	65	59	58	56	53	47
		1600	70	70	60	60	59	57	67	62	60	58	56	50
		1800	72	71	63	63	62	61	70	65	63	61	59	63
		2000	74	73	65	65	65	63	72	68	65	63	61	55
10	1600	70	70	62	62	61	60	65	61	58	56	55	50	
	1800	72	71	63	63	62	61	70	65	61	58	57	52	
	2000	74	73	64	64	63	62	71	67	64	61	60	64	
	2200	75	74	66	66	65	64	73	69	67	63	63	57	
	2400	77	75	68	68	68	67	76	72	69	65	65	60	

Notes:

1. All data represents conditions @ 0.25 inches w.g. external static pressure.
2. All sound data is measured in accordance with industry Standard ARI - 880.
3. Sound power levels are in decibels, re 10⁻¹² watts

Table 56: Radiated Primary Sound Power Data (dB) (Fan Off)

Casing Size	Inlet Size	Airflow (CFM)	Min dPs							0.5 dPs							1.0 dPs							2.0 dPs							3.0 dPs						
			2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7					
1	6	200	44	40	32	25	21	22	47	47	38	31	32	30	51	51	43	36	37	36	52	52	50	41	43	42	51	52	51	45	47	48					
		250	46	43	34	28	25	24	49	48	39	32	33	31	52	53	44	37	38	37	55	56	51	42	44	44	53	57	53	46	48	49					
		300	47	45	36	31	28	26	51	50	40	33	33	32	53	54	46	38	39	39	56	57	51	42	45	45	55	58	54	47	49	50					
		350	51	47	40	33	33	32	52	51	42	35	35	34	55	54	48	39	40	41	60	58	52	44	46	47	58	59	56	48	50	51					
		400	53	50	43	36	36	36	54	52	45	37	38	37	58	56	49	39	41	42	61	59	53	44	47	48	60	61	56	48	50	52					
		450	55	51	45	38	39	38	56	53	46	39	40	39	59	57	50	41	42	43	61	59	54	45	48	49	62	62	57	49	51	52					
	7	250	43	40	31	26	19	21	48	45	37	31	31	28	51	50	44	35	37	34	53	51	50	42	43	43	50	50	52	47	47	46					
		300	50	42	33	27	21	22	49	47	38	32	32	29	52	53	45	36	38	35	54	55	51	43	44	44	53	54	54	48	48	47					
		400	47	43	36	31	27	24	51	50	41	35	35	32	54	54	46	39	40	39	56	58	52	44	46	45	56	58	55	49	49	49					
		500	53	48	40	35	33	30	54	52	44	37	37	35	56	55	48	41	42	40	60	59	52	46	47	46	58	60	56	50	50	50					
		600	54	49	45	39	38	34	56	54	49	41	40	37	59	57	51	43	44	42	61	59	54	47	48	47	62	61	57	51	51	51					
		675	56	51	48	42	40	37	58	55	50	43	42	39	62	59	53	45	45	43	63	60	56	48	49	48	64	62	58	51	53	52					
	8	350	43	38	29	25	18	21	49	46	40	34	32	29	53	52	46	38	38	36	53	53	53	44	43	43	53	53	55	50	48	48					
		475	47	42	34	28	23	22	51	49	41	35	34	31	55	53	47	39	39	37	57	56	54	45	44	44	56	57	58	50	48	49					
		600	50	45	38	32	28	25	55	51	43	36	35	33	57	54	48	40	41	40	58	58	54	46	46	46	59	60	59	51	50	51					
		700	53	48	42	36	32	28	57	53	46	38	37	36	59	56	50	42	42	42	61	59	55	47	47	47	61	61	59	51	51	52					
		800	56	50	48	40	36	33	59	55	51	41	39	38	62	57	52	43	43	43	63	60	56	48	49	49	64	62	59	52	52	53					
		900	59	52	52	42	39	36	61	57	53	44	42	40	64	59	54	45	44	44	65	61	58	49	50	50	66	63	60	53	53	54					
	9	450	44	38	29	28	22	22	51	46	39	37	36	28	54	52	47	42	42	34	55	55	54	47	46	42	55	54	56	51	51	47					
		525	46	40	31	27	23	22	52	47	40	38	37	29	55	53	47	42	43	35	57	57	54	48	47	43	57	56	58	52	51	47					
		600	47	41	32	30	26	22	53	48	41	38	38	30	55	53	47	43	43	36	58	58	54	48	48	43	58	58	59	52	52	48					
		700	50	45	35	32	29	22	54	50	42	39	39	30	57	54	48	43	44	37	60	59	54	48	49	43	61	61	59	53	52	49					
		900	53	48	40	37	35	25	58	53	45	40	41	32	61	56	49	44	46	39	62	61	55	50	51	45	64	63	59	54	54	50					
		1100	58	52	47	42	41	30	62	56	50	45	44	35	63	58	52	46	48	40	66	62	56	51	52	47	67	65	60	55	55	51					
	2	9	450	45	39	30	26	20	21	48	45	38	35	35	29	52	52	46	41	41	35	52	55	53	48	46	44	52	54	55	53	50	49				
			525	46	41	31	27	21	21	49	46	39	36	36	29	52	52	46	41	42	36	54	56	54	48	47	44	54	56	58	54	51	49				
			600	49	44	34	31	26	22	49	47	40	37	37	30	53	53	47	42	43	37	56	58	54	49	47	45	56	58	59	54	52	50				
			700	50	45	37	35	31	24	52	50	43	40	40	32	54	54	48	44	44	39	58	60	55	50	49	46	59	61	59	54	52	51				
			900	57	50	43	39	36	27	55	52	45	41	41	34	56	55	49	45	45	40	59	61	55	50	49	46	60	63	59	55	53	51				
			1100	62	55	49	45	41	32	59	56	49	45	44	37	59	57	51	47	47	42	62	62	56	51	51	48	63	65	61	56	54	52				
		10	550	43	36	27	25	18	21	48	45	38	34	32	27	52	52	45	40	39	36	54	56	54	47	45	44	54	55	57	53	49	46				
			675	44	38	30	27	20	21	50	46	39	35	34	30	54	53	46	41	40	38	57	58	54	48	46	45	55	58	58	53	49	47				
			800	47	41	33	30	24	22	51	47	40	37	36	31	55	53	47	42	41	39	58	59	54	48	46	45	58	61	58	53	50	48				
			1000	50	46	39	37	33	27	54	51	44	41	41	37	56	54	48	44	44	41	60	60	55	49	47	46	61	63	59	54	51	50				
			1200	53	49	43	40	36	30	57	53	46	42	42	38	58	55	49	44	45	42	61	60	55	49	48	47	63	64	59	54	52	51				
			1400	60	53	48	44	39	34	58	55	49	44	43	39	61	58	52	47	47	44	63	61	55	50	50	49	65	64	59	55	53	53				
		12	800	45	38	28	25	20	20	51	46	40	36	35	29	56	53	46	41	40	35	57	58	54	48	45	42	58	57	56	53	49	47				
			1000	48	40	32	28	23	21	52	47	41	37	36	31	57	53	46	42	41	36	59	60	54	49	46	43	61	61	58	54	50	48				
			1200	52	44	37	31	27	23	54	48	42	38	37	32	58	54	47	43	42	38	62	60	54	49	47	45	63	63	58	54	51	49				
			1400	54	45	40	35	31	25	57	51	44	40	39	34	59	55	48	44	44	40	63	61	55	50	48	45	66	64	59	55	51	49				
			1700	57	49	44	41	36	30	61	53	46	42	41	36	61	56	50	45	45	42	65	61	56	51	49	48	68	66	59	56	53	51				
			2000	61	53	49	44	41	34	64	56	50	45	43	39	65	58	52	47	47	44	67	62	56	52	51	49	70	66	60	56	54	53				
3	12	800	43	39	30	25	20	22	50	46	38	35	33	29	55	54	44	41	39	35	55	60	51	49	47	43	56	59	55	53	50	47					
		1000	44	40	33	28	23	22	51	47	39	36	36	31	57	55	45	42	41	37	58	61	52	49	47	44	59	61	56	54	51	48					
		1200	47	42	35	30	25	22	53	48	39	37	37	32	58	55	45	42	42	38	60	61	53	49	47	44	61	64	57	54	51	48					
		1400	49	45	39	34	29	24	55	50	41	38	38	33	59	55	46	43	43	40	62	62	53	50	47	44	64	65	57	54	51	49					
		1700	53	49	43	39	35	29	57	53	45	41	41	36	60	56	47	43	44	41	63	63	54	50	49	47	66	66	58	54	52	50					
		2000	57	53	48	43	40	34	61	56	48	44	43	39	63	58	50	46	46	43	66	64	55	50	51	49	68	68	59	56	55	53					
	14	1050	44	38	30	26	22	20	54	49	39	36	35	30	58	56	47	42	41	36	58	61	55	49	46	44	58	61	57	53	49	49					
		1400	45	41	34	29	24	21	56	50	40	37	36	32	61	57	48	43	42	38	62	63	56	50	48	45	62	65	59	54	50	50					
		1800	49	46	39	31	27	23	58	52	43	39	38	34	64	58	48	43	44	41	65	66	56	51	49	48	66	68	61	56	53	52					
		2200	55	50	46	38	33	28	62	55	47	42	41	37	65	60	50	45	45	42	68	67	57	51	50	48	70	70	62	57	54	52					

Table 57: Discharge Primary Sound Power Data (dB) (Fan Off)

Casing Size	Inlet Size	Airflow (CFM)	Min dPs							0.5 dPs							1.0 dPs							2.0 dPs							3.0 dPs						
			2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7					
1	6	200	41	39	31	26	19	21	50	49	42	35	33	32	51	54	51	40	39	38	52	56	60	47	46	45	51	57	61	52	51	49					
		250	43	41	35	30	23	22	50	51	44	37	35	34	52	56	52	41	41	40	53	58	61	48	47	46	53	58	63	53	51	49					
		300	45	44	40	35	28	26	52	52	47	40	38	38	55	57	53	43	43	42	56	61	61	49	48	47	55	61	64	54	52	50					
		350	47	46	41	36	31	30	55	55	48	42	40	41	56	58	54	44	44	43	58	63	62	50	49	48	58	64	65	55	52	51					
		400	50	49	45	39	35	36	56	56	50	43	42	42	59	59	55	46	46	45	61	64	62	50	50	49	60	65	66	55	53	51					
	450	52	51	47	42	38	39	57	56	51	45	43	43	61	61	56	48	47	46	53	65	63	52	51	50	63	67	67	56	54	51						
	7	250	43	39	32	28	20	21	47	48	43	38	34	33	50	54	52	42	40	39	50	56	60	50	47	46	50	56	62	55	51	50					
		300	43	41	37	33	25	22	48	49	44	39	35	34	51	55	53	43	41	40	53	59	61	50	47	46	52	58	64	56	51	50					
		400	45	44	39	36	28	26	52	53	47	42	38	37	53	57	53	45	43	42	55	62	62	52	48	47	55	62	65	57	53	51					
		500	48	47	44	40	34	34	56	55	50	45	42	42	58	59	55	48	46	45	59	63	62	53	50	49	59	65	66	58	54	52					
		600	51	51	48	45	38	38	60	58	54	50	45	45	62	60	57	50	48	47	63	64	62	54	52	51	63	66	67	58	55	53					
		675	53	53	50	47	41	40	61	59	55	51	46	46	64	62	59	52	50	49	65	65	63	55	52	51	64	67	67	59	55	54					
		750	55	55	52	50	44	42	63	61	57	53	49	49	66	65	61	53	52	51	68	68	66	58	56	55	69	71	72	63	58	57					
	8	350	44	39	36	31	23	21	51	51	46	40	38	37	53	59	54	46	45	44	54	62	65	55	51	50	52	63	68	60	56	55					
		475	46	44	41	38	32	27	53	53	48	42	41	41	54	60	55	47	46	45	56	65	65	55	52	51	60	66	69	62	56	55					
		600	48	47	43	40	34	30	58	57	51	45	44	45	58	61	57	49	48	47	59	66	65	56	53	52	61	68	70	61	57	56					
		700	51	50	46	44	37	36	60	58	53	48	46	46	62	62	58	51	50	49	63	67	66	57	54	53	63	69	71	62	57	56					
		800	53	53	49	48	41	39	61	59	55	50	47	47	65	64	60	52	51	50	65	67	66	57	54	53	66	70	71	63	58	56					
		900	55	55	52	50	44	42	63	61	57	53	49	49	66	65	61	53	52	51	68	68	66	58	56	55	69	71	72	63	58	57					
		950	57	57	54	52	46	44	65	63	59	55	51	51	68	67	63	55	54	53	70	69	67	59	57	56	71	73	74	64	59	58					
	9	450	42	40	36	31	22	21	53	54	50	41	42	42	53	57	59	47	47	46	54	60	65	55	53	52	55	59	66	63	58	57					
		525	44	41	37	32	23	21	54	55	51	42	43	43	55	57	60	48	48	47	56	61	66	56	54	53	56	61	67	63	58	57					
		600	46	43	39	35	28	24	54	56	53	43	43	43	57	58	61	49	49	48	58	62	67	57	55	54	59	63	68	64	59	57					
		700	50	46	42	38	33	29	56	57	54	45	44	44	58	58	62	50	49	61	63	67	58	56	55	54	61	65	69	64	60	58					
		900	53	51	48	45	39	37	61	60	57	49	47	46	64	62	64	52	51	50	64	65	68	59	57	56	65	67	70	64	60	59					
		1100	57	55	52	50	44	43	65	61	60	53	49	49	67	64	65	55	53	52	69	67	69	61	58	57	69	69	70	65	61	60					
		1200	59	57	54	52	46	44	67	65	64	57	53	53	69	66	67	57	56	55	71	69	71	63	60	59	71	71	72	66	62	61					
	2	9	450	45	41	37	34	26	22	50	51	44	39	41	39	52	58	53	45	47	47	53	63	62	55	54	52	55	64	65	61	58	56				
525			46	43	38	35	28	24	51	52	45	40	43	41	54	59	53	45	47	48	55	64	62	55	54	53	56	65	67	61	58	56					
600			47	44	40	38	32	27	51	53	46	41	44	42	55	59	54	46	49	49	56	64	62	55	54	53	57	66	67	61	58	56					
700			48	47	41	40	35	31	52	55	47	43	45	44	56	60	54	47	50	50	57	65	62	55	54	54	58	67	67	61	58	56					
900			53	52	47	46	43	40	56	57	50	46	48	47	57	62	55	49	52	51	60	67	62	55	56	55	60	69	67	61	59	57					
1100		57	56	51	51	48	46	59	60	54	51	51	50	61	63	56	51	54	52	63	68	63	56	57	56	63	71	67	61	60	58						
10		550	45	40	36	32	23	22	49	50	45	41	42	36	53	56	54	47	48	47	52	61	62	55	53	52	53	61	66	61	58	54					
		675	45	41	37	34	27	24	50	51	46	42	44	38	54	57	54	47	49	48	55	63	63	56	54	53	56	63	66	62	58	55					
		800	46	44	40	38	32	29	51	52	47	43	45	40	55	58	55	48	50	49	56	64	63	56	55	54	58	66	67	62	59	56					
		1000	49	47	44	44	39	37	52	53	49	45	48	43	56	58	55	49	52	50	57	65	63	57	56	55	59	68	67	62	59	57					
		1200	53	51	48	49	44	42	56	56	51	48	50	46	58	59	56	51	54	51	60	65	64	58	57	57	61	69	68	63	60	58					
		1400	57	55	52	53	48	47	59	59	54	51	53	48	61	61	57	53	56	52	62	65	63	58	58	57	63	69	68	63	61	59					
		1600	61	59	56	57	52	50	62	62	59	56	54	53	48	64	64	60	55	58	62	69	67	64	59	63	58	70	71	68	64	66	57				
		1800	65	63	60	61	56	54	66	66	63	61	59	58	53	68	68	64	60	63	71	69	67	65	64	63	64	71	72	68	64	67	59				
	2000	69	67	64	65	60	58	70	70	67	65	63	62	57	72	72	68	64	70	73	71	69	67	66	65	66	72	73	69	65	68	60					
3	12	800	46	40	38	33	24	22	52	52	47	43	44	38	57	60	55	50	50	49	57	65	63	58	57	53	59	66	67	63	61	58					
		1000	49	43	41	34	30	26	54	53	48	44	46	40	59	60	55	50	52	50	60	66	64	58	57	54	61	68	68	64	62	59					
		1200	50	45	45	38	36	32	55	54	50	46	48	42	60	60	56	51	53	51	63	67	64	58	58	55	63	69	69	64	62	60					
		1400	53	49	50	42	41	38	57	55	52	48	50	45	60	60	56	51	54	52	65	67	65	59	59	55	65	70	69	64	63	61					
		1700	56	52	55	46	46	45	58	60	55	50	54	48	61	61	58	53	56	53	66	67	65	59	60	56	68	71	69	65	64	62					
		2000	60	57	59	51	51	50	62	61	58	52	56	50	63	64	61	55	59	55	67	68	65	59	61	57	69	72	69	65	65	63					
	14	1050	48	40	37	30	21	21	57	55	49	45	48	40	60	63	57	50	56	53	61	68	66	58	60	60	63	68	67	64	63	58					
		1400	50	43	43	32	26	24	58	56	51	47	51	44	62	63	58	52	56	54	63	70	67	59	61	60	65	72	71	65	63	61					
		1800	54	48	50	37	33	33	61	57	53	49	52	46	65	64	59	53	57	55	67	71	67	60	61	61	67	74	72	65	64	62					
		2200	56	51	55	42	38	37	62	59	56	51	53	48	66	65	60	5																			