

HCV – HCV Pressure Data

Performance Notes For Pages 266 - 272G

1. ΔP_s is the difference in static pressure from inlet to discharge.
2. Minimum ΔP_s is the lowest inlet-to-discharge static pressure at which controls can be pressure independent.
3. ΔP_t is the difference in total pressure from inlet-to-discharge.
4. Lw is the sound power level, re 10^{-12} watts.

Correction Factors For Minimum Overall Pressure Drop With Accessories

SIZE	100-150	175-250	300-400
Pressure Drop	ΔP_s	ΔP_s	ΔP_s
Basic Assembly	1.0	1.0	1.0
Attenuator	1.1	2.1	6.8
1 Row Coil	1.03	2.0	6.4
2 Row Coil	2.06	3.75	12.0
Multi Discharge	0.7	0.9	2.8
Round Discharge	3.21	2.4	9.0

ΔP_s For Optional Electric Heater Banks

Size	ΔP_s [Pa]
100-150	2.2
175-225	2.1
250	1.0
300	1.5
350	1.5
400	1.1

Above static pressure ΔP_s to be added to the minimum ΔP_s from the performance table on this page. These are approximations only as actual ΔP_s will depend on the number of elements used.

To obtain minimum ΔP_s for basic assembly with accessories:

1. From factor table, start with 1.0 for the basic assembly.
2. Select correction factor for each accessory. Add all factors together, including 1.0 for the basic assembly.
3. Multiply the minimum ΔP_s from the performance table on this page by the sum of the factors to obtain the overall minimum ΔP_s .

Example:

A 150 Circular Inlet Assembly with attenuator, 2 row coil and round discharge handles $0.189\text{m}^3/\text{s}$.

	ΔP_s
Basic Assembly	1.0
Attenuator	1.1
2 Row Coil	2.06
Round Discharge	3.21
	7.37

From the performance table, minimum $\Delta P_s = 34\text{ Pa}$. $7.37 \times 34 = 251\text{ Pa}$ minimum ΔP_s with options added.

CASE SIZE	VOLUME m^3/s	MIN ΔP_s		MIN ΔP_t	
		Circular Inlet	Square Inlet	Circular Inlet	Square Inlet
HCV 100	0.040	9	6	23	17
	0.055	16	12	44	32
	0.070	27	19	72	52
	0.085	39	28	106	76
	0.100	54	39	146	105
HCV 125	0.050	5	3	13	8
	0.075	12	8	31	20
	0.100	22	14	56	35
	0.125	31	20	84	53
	0.150	44	28	121	76
HCV 150	0.080	8	6	17	12
	0.110	14	10	31	22
	0.140	21	15	49	35
	0.170	28	20	70	50
	0.200	37	27	95	68
HCV 175	0.120	5	4	16	12
	0.165	10	8	31	23
	0.210	15	11	49	37
	0.255	20	15	70	53
	0.300	27	20	96	72
HCV 200	0.150	4	3	13	8
	0.200	8	5	23	15
	0.250	12	8	36	23
	0.300	17	11	52	33
	0.350	22	14	69	44
HCV 225	0.200	4	3	11	8
	0.275	7	5	21	15
	0.350	12	9	35	25
	0.425	16	12	49	35
	0.500	22	16	68	49
HCV 250	0.250	7	5	17	12
	0.350	13	9	32	23
	0.450	19	13	50	36
	0.550	27	19	74	53
	0.625	35	25	96	68
HCV 300	0.400	4	6	15	12
	0.550	8	6	28	22
	0.700	14	11	47	36
	0.850	19	15	68	52
	1.000	26	20	93	72
HCV 350	0.600	4	3	15	10
	0.825	6	4	26	18
	1.050	9	6	41	28
	1.275	13	9	61	42
	1.500	20	14	86	59
HCV 400	0.750	3	2	15	9
	1.000	5	3	27	17
	1.250	8	5	42	26
	1.500	13	8	62	38
	1.900	25	16	104	64
HCV 600 x 400	1.250		4		10
	2.000		11		28
	2.500		16		42
	3.000		24		61
	3.750		40		98