

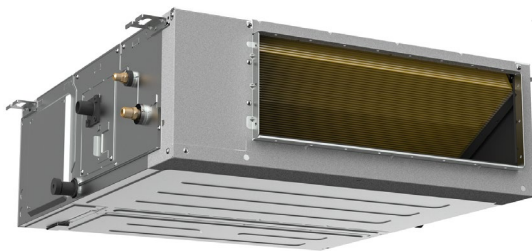


HHHP-HE

High Efficiency

Horizontal Soffit Mount System

R454b Model



3/4 Ton - 5 Ton, with Efficiencies up to 20.00 SEER2 and 13.3 EER2



R454b

The HHP is a highly efficient split system, with a horizontal ceiling mount soffit mount fan coil and an outdoor side discharge heat pump unit. The indoor fan coil can be installed in various locations, and can be configured for bottom return air or ducted return air. This system supplies comfortable cooling and heating performance at low sound levels.

Typical installations for the HHP include:

- Apartments
- Condominiums
- Independent Care Facilities
- Pre Manufactured Homes
- Modular Buildings
- Student Housing
- Offices
- Stores
- Single Family Home Additions



Features

Highly Efficient / High Performance

- Highly Efficient Inverter Compressor, with Efficiencies up to 20.00 SEER2
- Air Handler EC Blower Motor, with Available ESP up to 0.80" WC
- Low Amp Draw DC motor in Outdoor HP

Quiet Operation, Inside and Outside

- Low Sone DC motor in HHP Fan Coil
- Quiet Inverter Compressor in Outdoor Heat Pump, with low Sound Levels

Heating at Low Ambient Conditions

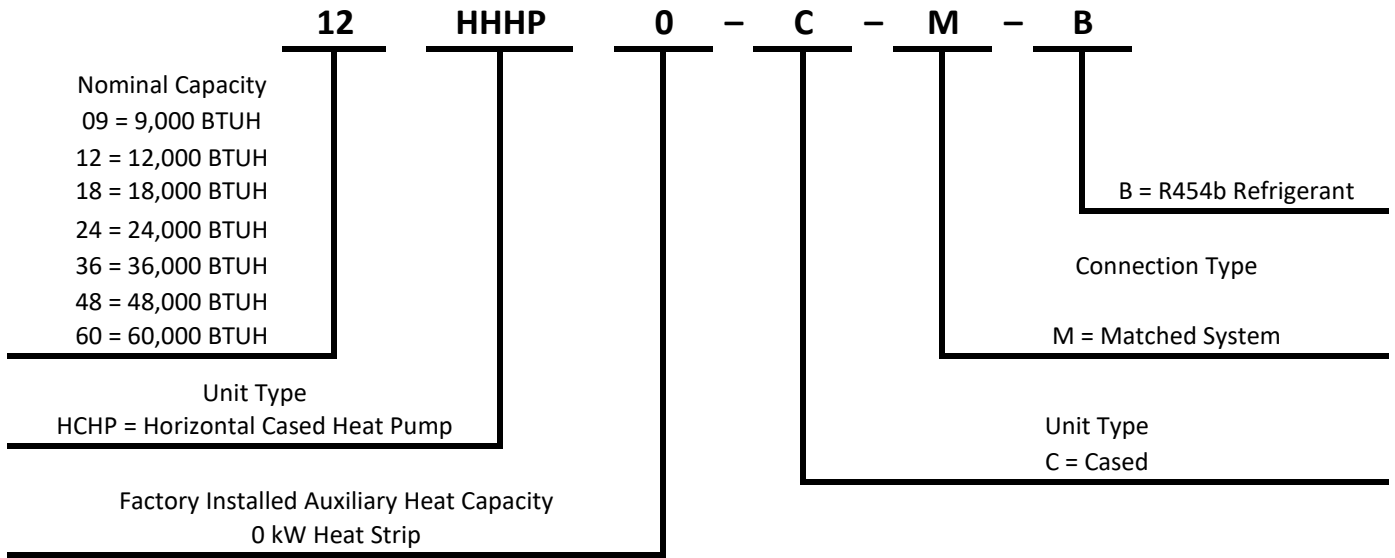
- Standard Base Pan Heaters
- Crankcase Heater

Design

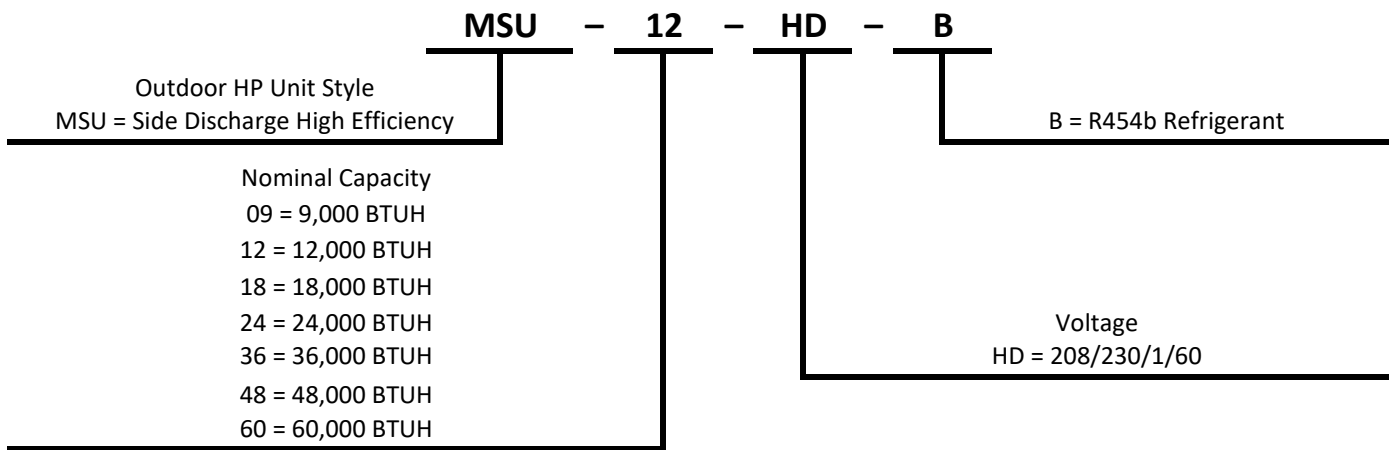
- Standard Rear Return Air or Optional Bottom Return Air
- Installed Indoor Fan Coil Freeze Protector
- Automatic Restart Function
- Available Optional 24V Control Interface for use with 3rd Party Thermostats
- Liquid Line Service Port
- External Condensate Pump (9 - 18) or Installed Condensate Pump (24 - 60)
- Cleanable Filters in Fan Coil
- Gold Pre-Coated Fins on Evaporator and Condenser Coils
- Compressor Time Delay
- Compressor Overload and Over Current Protection
- Environmentally Friendly R454b Refrigerant
- Factory Installed R454b Refrigerant Leak Sensor

Nomenclature

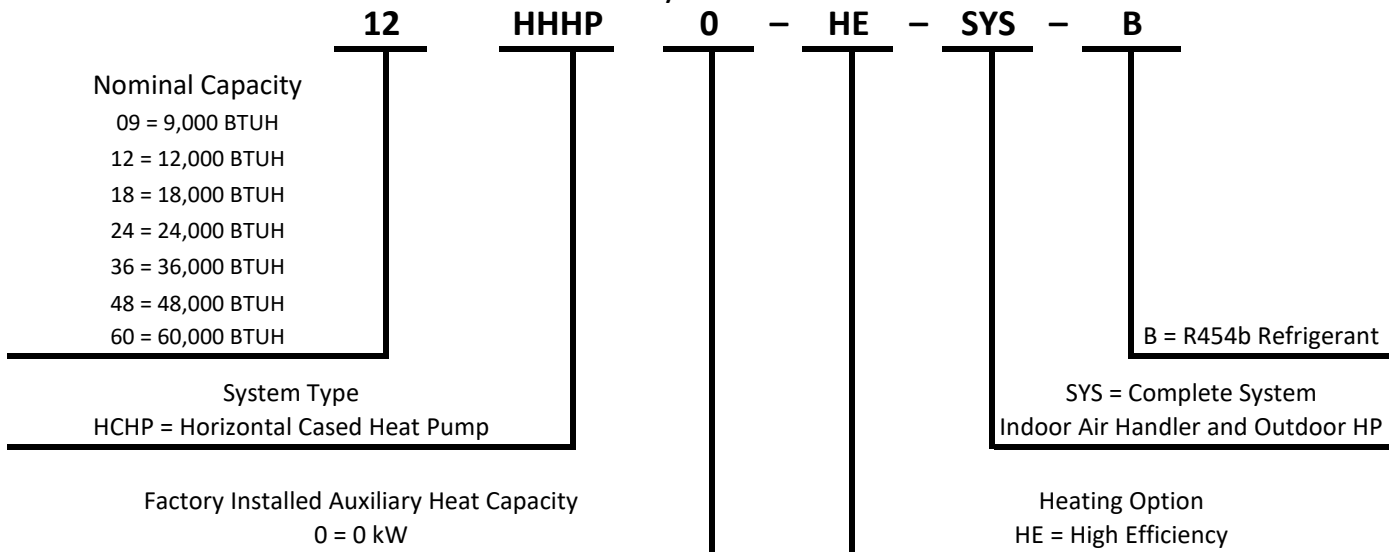
Indoor Unit



Outdoor Unit



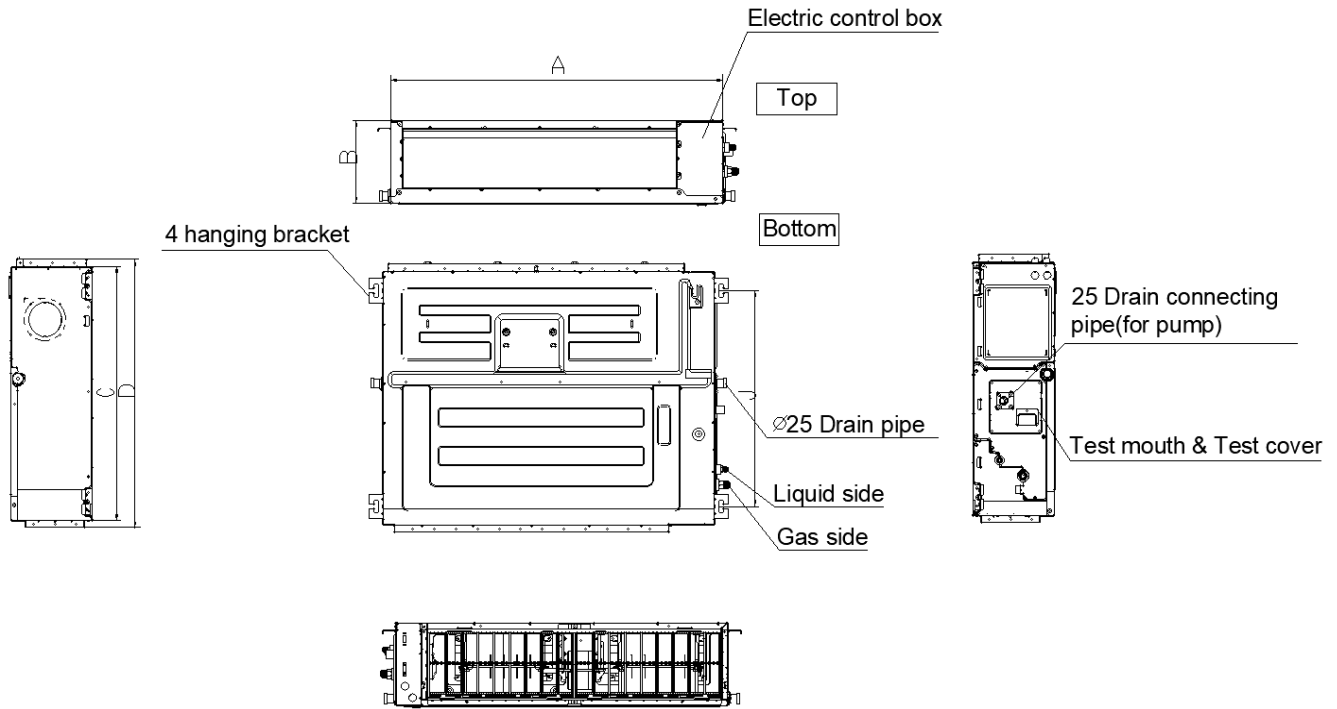
System



HHHP

0.75 ton - 5.00 ton Heat Pump Fan Coil

Dimensional Data



Unit	A	B	C	D
9HHHP0-C-M-B	27.500	9.650	29.500	31.250
12HHHP0-C-M-B	27.500	9.650	29.500	31.250
18HHHP0-C-M-B	39.375	9.650	29.500	31.250
24HHHP0-C-M-B	39.375	9.650	29.500	31.250
36HHHP0-C-M-B	47.250	11.810	29.500	31.250
48HHHP0-C-M-B	47.250	11.810	29.500	31.250
60HHHP0-C-M-B	55.120	14.960	31.500	33.250

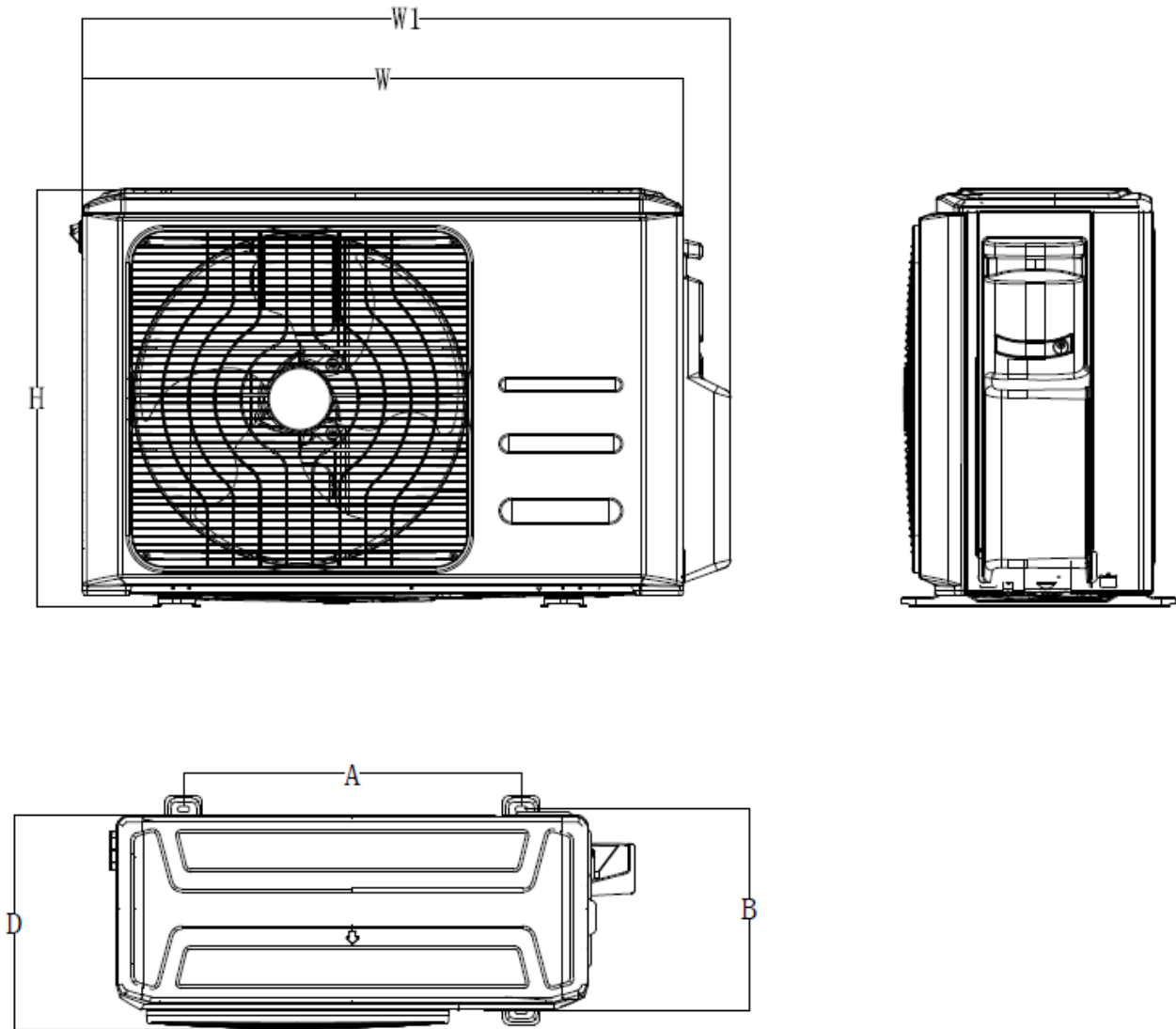
Dimensions shown are in Inches

Condensate Connections on all units are 1"

MSU

3/4 ton - 3 ton Heat Pump Outdoor Units

Dimensional Data



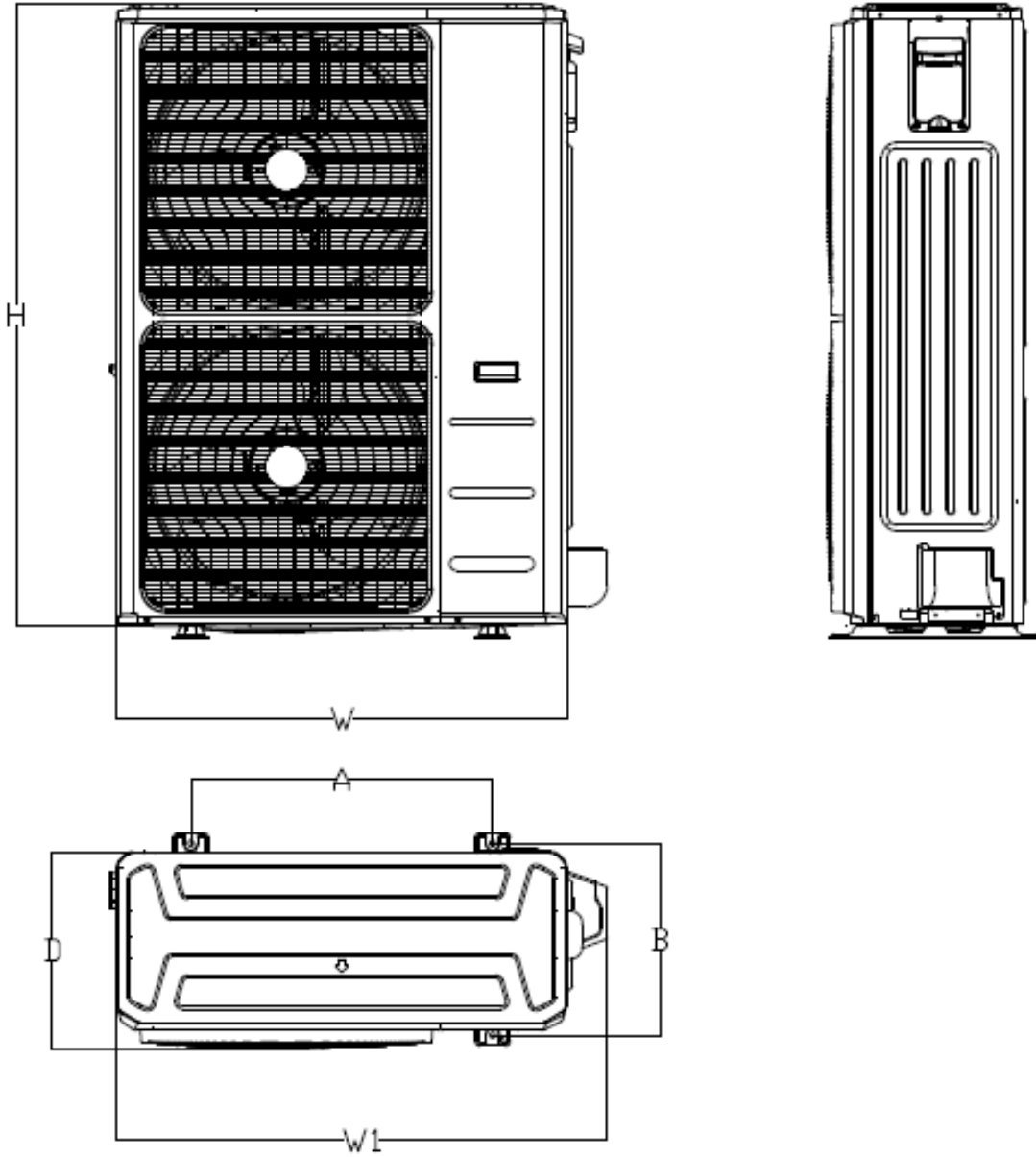
Unit	Unit Width (W)	Unit Depth (D)	Unit Height (H)	W1	Bracket Width (A)	Bracket Depth (B)
MSU-09HD-B	31.69	12.99	21.81	34.38	20.13	13.63
MSU-12HD-B	31.69	12.99	21.81	34.38	20.13	13.63
MSU-18HD-B	35.04	13.46	26.50	37.63	26.13	15.00
MSU-24HD-B	37.24	16.14	31.89	40.50	26.50	15.88
MSU-36HD-B	38.58	16.34	38.39	41.85	24.25	17.38

Dimensions shown are in Inches

MSU

4 ton - 5 ton Heat Pump Outdoor Units

Dimensional Data



Unit	Unit Width (W)	Unit Depth (D)	Unit Height (H)	W1	Bracket Width (A)	Bracket Depth (B)
MSU-48HD-B	37.48	16.34	52.48	41.13	25.25	16.88
MSU-60HD-B	37.48	16.34	52.48	41.13	25.25	16.88

Dimensions shown are in Inches

HHHP

0.75 ton - 2.00 ton Fan Coils

Fan Coil Specifications

System Model			9HHHP0-HE-SYS-B	12HHHP0-HE-SYS-B	18HHHP0-HE-SYS-B	24HHHP0-HE-SYS-B
Indoor Model			9HHHP0-C-M-B	12HHHP0-C-M-B	18HHHP0-C-M-B	24HHHP0-C-M-B
Outdoor Model			MSU-09HD-B	MSU-12HD-B	MSU-18HD-B	MSU-24HD-B
Power supply		V,Hz,P h	208-230~1-60	208-230~1-60	208-230~1-60	208-230~1-60
Cooling	Capacity	Btu/h	9000	12000	17500	24000
	Input	W	676.0	999.0	1315.0	1920.0
	Rated current	A	4.90	4.60	5.80	8.30
	EER2	Btu/W	13.0	12.0	13.3	12.5
	SEER2		19.70	19.50	20.00	19.00
Heating at 47°F	Capacity	Btu/h	10000	12000	20000	25000
	Input	W	735.0	952.0	1500.0	2010.0
	Rated current	A	3.30	4.10	6.50	8.70
	HSPF2		11.5	10.5	11.3	11.0
Fan Coil Power Supply			Fan Coil Powered from Outdoor Heat Pump			
Indoor fan motor	Model		ZKFN-34-10-1L	ZKFN-34-10-1L	ZKFN-80-10-1L	ZKFN-120-10-1L
	Qty		1	1	1	1
	Input	W	165	165	165	165
	RLA	A	1.5	1.5	1.8	2.2
Indoor air flow (Turbo/Hi/Med/Lo/Si) (No duct)		CFM	344/288/231/201/122	419/350/256/216/135	706/618/530/441/N/A	854/706/618/500/N/A
ESP	Range	In. wg.	0--0.80	0--0.80	0--0.80	0--0.80
Indoor noise level (Turbo/Hi/Med/Lo/Si)		dB(A)	N/A/30.5/29.5/28.5/28.0	N/A/33.5/32.5/31/29	40.0/37.0/35.0/33.0/29.0	43.0/40.0/38.0/35.5/29.5
Indoor unit	Dimension (WxDxH)	inch	27.56x29.53x9.65	27.56x29.53x9.65	39.37x29.53x9.65	39.37x29.53x9.65
	Packing(WxDxH)	inch	36.4x33.5x11.7	36.4x33.5x11.7	48.2x33.9x12.0	48.2x33.9x12.0
	Net/Gross weight	lbs.	62.2 / 67.7	64.2 / 73.9	79.8 / 91.3	80.5 / 91.9
Design pressure		PSIG	550 / 340	550 / 340	550 / 340	550 / 340
Drainage water pipe diameter		inch	ODΦ1	ODΦ1	ODΦ1	ODΦ1
Refrigerant piping	Liquid side/ Gas side	inch	Φ1/4 / Φ 3/8	Φ1/4 / Φ 3/8	Φ1/4 / Φ 1/2	Φ3/8 / Φ 5/8
Controller			Wired control	Wired control	Wired control	Wired control
Indoor	Cooling	°F	60~90	60~90	60~90	60~90
	Heating	°F	32~86	32~86	32~86	32~86
Outdoor	Cooling	°F	-22~122	-22~122	-22~122	-22~122
	Heating	°F	-22~75	-22~75	-22~75	-22~75



Outdoor Heat Pump Specifications

System Model		9HHHP0-HE-SYS-B	12HHHP0-HE-SYS-B	18HHHP0-HE-SYS-B	24HHHP0-HE-SYS-B	
Indoor Model		9HHHP0-C-M-B	12HHHP0-C-M-B	18HHHP0-C-M-B	24HHHP0-C-M-B	
Outdoor Model		MSU-09HD-B	MSU-12HD-B	MSU-18HD-B	MSU-24HD-B	
Power supply	V/Hz/Ph	208/230/60/1	208/230/60/1	208/230/60/1	208/230/60/1	
Max. fuse	A	15.0	15.0	20.0	25.0	
Minimum circuit ampacity	A	12.0	12.0	18.0	24.0	
Compressor	Model	KSK103D33UEZ3	KSK103D33UEZ3	KSN140D58UFZ	KTM240D46UKT2	
	Type	ROTARY	ROTARY	ROTARY	ROTARY	
	Brand	GMCC	GMCC	GMCC	GMCC	
	Capacity	W	2035/3255	2035/3256	4315	4780 / 7600
	Input	W	325/826	325/827	1090	805 / 2045
	Rated current (RLA)	A	2.40/5.65	2.40/5.66	7.20	4.15 / 9.30
	Refrigerant oil	ml	VG74/310	VG74/310	VG74/440	VG74/620
Outdoor fan motor	Model	ZKFN-34-10-1L	ZKFN-34-10-1L	ZKFN-80-10-1L	ZKFN-120-10-1L	
	Qty		1	1	1	
	Input	W	34	34	80	120
	RLA	A	0.60	0.60	0.90	1.00
	Speed	r/min	800/700/600	800/700/601	780/700/550	810/700/450
Outdoor air flow (Max.)	CFM	1236.1	1236.1	1765.8	2236.7	
Outdoor noise level	dB(A)	53.0	55.5	58.0	60.0	
Throttle type		EXV	EXV	EXV+Throttle Valve	EXV+Throttle Valve	
Outdoor unit	Dimension (W×D×H)	inch	30.12x11.93x21.85	30.12x11.93x21.86	35.04x13.46x26.50	37.24x16.14x31.89
	Packing (W×D×H)	inch	34.92x13.27x24.02	34.92x13.27x24.03	39.17x15.67x29.13	42.91 x 19.68 x 34.84
	Net/ Gross weight	lbs.	62.17 / 67.68	62.17 / 67.69	92.6 / 100.3	122.1 / 132.3
Refrigerant	Type/Precharge	Oz	R454B / 32.45	R454B / 32.45	R454B / 47.97	R454B / 70.55
Refrigerant precharge	ft	25	25	25	25	
Additional charge for each ft	oz	0.16	0.16	0.16	0.32	
Design pressure	PSIG	550 / 340	550 / 340	550 / 340	550 / 340	
Refrigerant piping	Liquid / Suction	inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 1/2"	3/8" / 5/8"
	Max. pipe length	ft	82	82	98.4	164
	Max. vertical lift	ft	49.2	49.2	65.6	82.0
Ambient Range	Cooling	°F	-22~122	-22~122	-22~122	-22~122
	Heating	°F	-22~75	-22~75	-22~75	-22~75

HHHP

3.00 ton - 5.00 ton Fan Coils

Fan Coil Specifications

System Model			36HHHP0-HE-SYS-B	48HHHP0-HE-SYS-B	60HHHP0-HE-SYS-B
Indoor Model			36HHHP0-C-M-B	48HHHP0-C-M-B	60HHHP0-C-M-B
Outdoor Model			MSU-36HD-B	MSU-48HD-B	MSU-60HD-B
Power supply		V/Hz/Ph	208/230/60/1	208/230/60/1	208/230/60/1
Cooling	Capacity	Btu/h	36000	48000	58000
	Input	W	3530.0	4800.0	5800.0
	Rated current	A	15.3	21.3	25.6
	EER2	Btu/W	10.1	10.0	10.0
	SEER2		18.70	17.10	17.00
Heating at 47 °F	Capacity	Btu/h	40000	50000	60000
	Input	W	3170.0	4200.0	4750.0
	Rated current	A	14.2	19.0	21.0
	HSPF2		10.2	9.8	9.7
Fan Coil Power Supply			Fan Coil Powered from Outdoor Heat Pump		
Indoor fan motor	Model		ZKFN-400-8-1	ZKFN-560-8-4	ZKFN-560-8-4
	Qty		1	1	1
	Input	W	400	560	560
	FLA	A	1.6	2.5	2.5
	Speed	r/min	790 / 730 / 670	1000 / 950 / 880	850 / 780 / 700
Indoor air flow (Turbo/Hi/Med/Lo) (No duct)		CFM	1236/1060/942/765	1648/1472/1295/1060	2001/1707/1413/1118
ESP	Range	ln. wg.	0-0.80	0-0.80	0-0.80
Indoor noise level (Hi/Med/Lo)		dB(A)	45.0 / 40.0 / 33	51.0 / 46.0 / 42.0	52.0 / 48.0 / 43.0
Indoor unit	Dimension (WxDxH)	inch	47.24x29.53x11.81	47.24x29.53x11.81	55.12x31.50x14.96
	Packing(WxDxH)	inch	56.10x33.86x14.13	56.10x33.86x14.13	62.99x36.02x17.52
	Net/Gross weight	lbs.	106.26 / 120.37	111.33 / 124.78	161.4 / 178.1
Design pressure		PSIG	550 / 340	550 / 340	550 / 340
Drainage water pipe diameter		inch	ODΦ1	ODΦ1	ODΦ1
Refrigerant piping	Liquid side/ Gas side	inch	Φ3/8 / Φ 3/4	Φ3/8 / Φ 3/4	Φ3/8 / Φ 3/4
Controller			Wired Control	Wired control	Wired control
Indoor	Cooling	°F	60~90	60~90	60~90
	Heating	°F	32~86	32~86	32~86
Outdoor	Cooling	°F	-22~122	-22~122	-22~122
	Heating	°F	-22~75	-22~75	-22~75

Outdoor Heat Pump Specifications

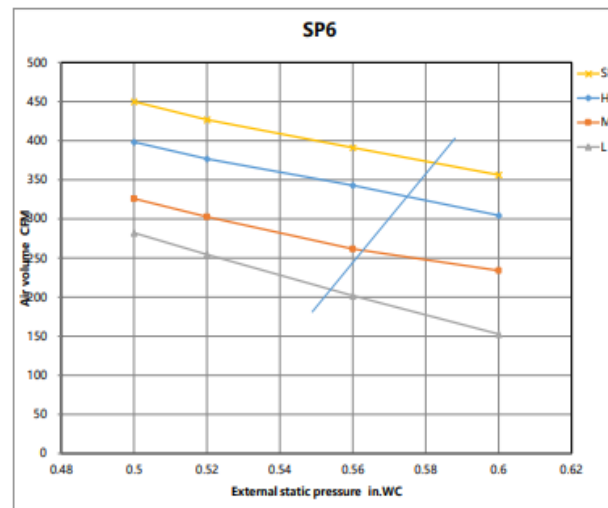
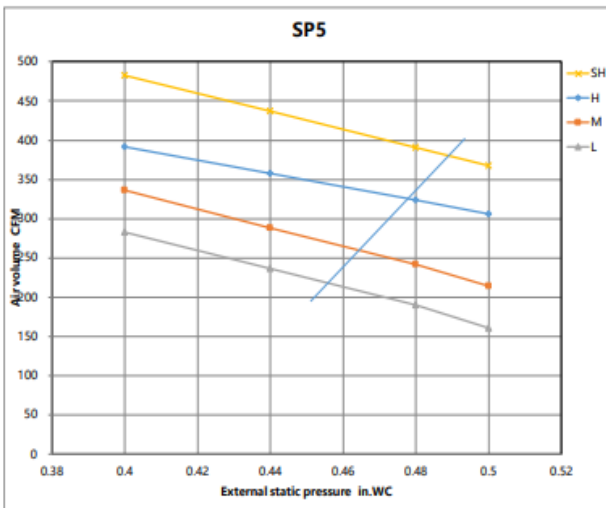
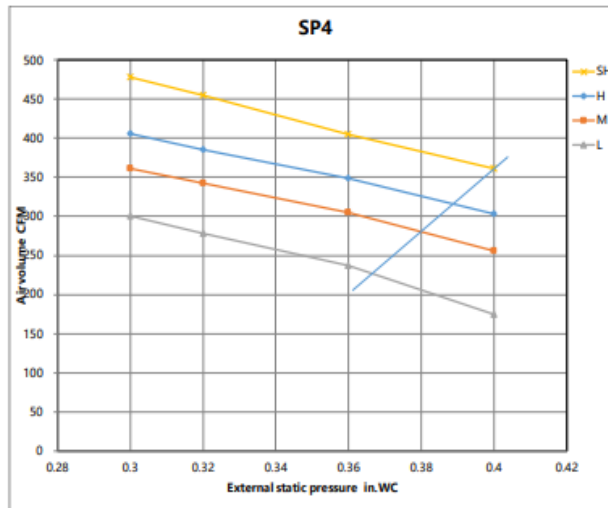
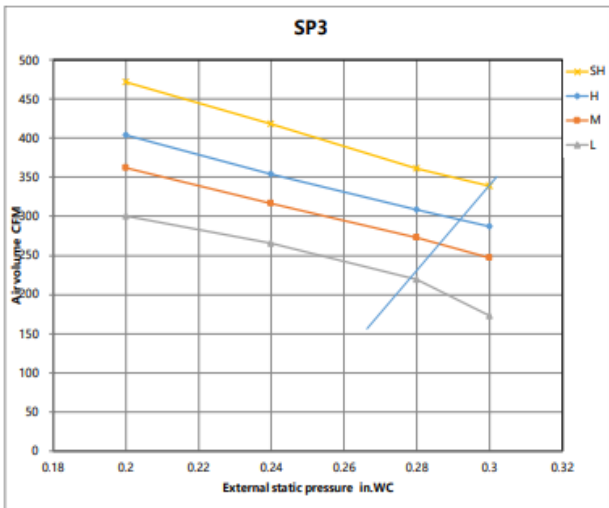
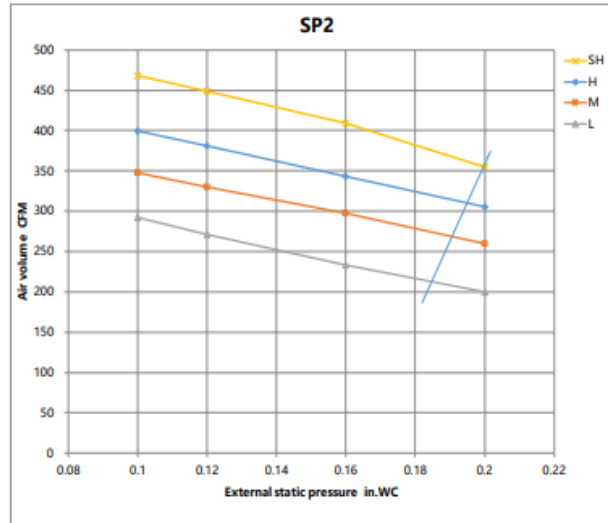
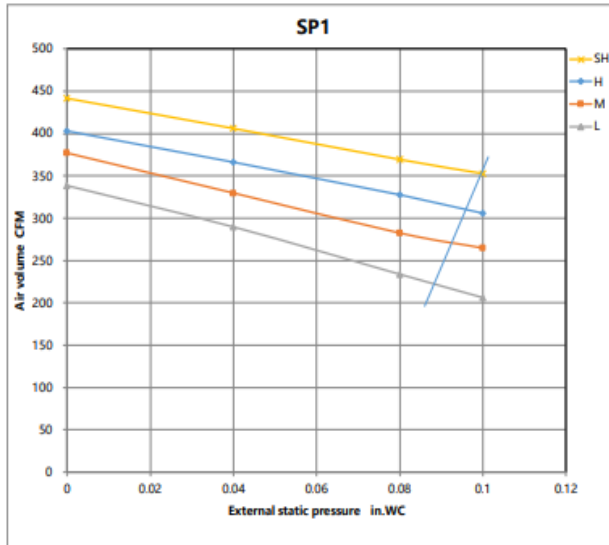
System Model		36HHHP0-HE-SYS-B	48HHHP0-HE-SYS-B	60HHHP0-HE-SYS-B	
Indoor Model		36HHHP0-C-M-B	48HHHP0-C-M-B	60HHHP0-C-M-B	
Outdoor Model		MSU-36HD-B	MSU-48HD-B	MSU-60HD-B	
Power supply	V/Hz/Ph	208/230/60/1	208/230/60/1	208/230/60/1	
Max. fuse	A	35	40	45	
Minimum circuit ampacity	A	33	39	42	
Compressor	Model	KTF310D43UMT	KTQ420D1UMU	KTQ420D1UMU	
	Type	ROTARY	ROTARY	ROTARY	
	Brand	GMCC	GMCC	GMCC	
	Input	W	2765	3700	
	Rated current (RLA)	A	5.4	7.0	
	Refrigerant oil	ml	VG75 / 1000	VG75 / 1400	VG75 / 1400
Outdoor fan motor	Model	ZKFN-120-10-1L	ZKFN-85-10-1L	ZKFN-85-8-22-5	
	Qty	1	2	2	
	Input	W	120	85	
	RLA	A	1.4	2.2	
	Speed	r/min	950/800/500	850/750/650	850/750/650
Outdoor air flow (Max.)	CFM	2413	4238	4238	
Outdoor noise level	dB(A)	63.0	64.0	64.0	
Throttle type		EXV+Throttle Valve	EXV+Throttle Valve	EXV+Throttle Valve	
Outdoor unit	Dimension (W×D×H)	inch	37.24x16.14x31.39	37.48x16.34x52.48	37.48x16.34x52.48
	Packing (W×D×H)	inch	42.91 x 19.68 x 34.84	43.1 x 19.5 x 58.3	43.1 x 19.5 x 58.3
	Net/ Gross weight	lbs.	152.3 / 162.5	208.8 / 239.9	209.4 / 240.1
Refrigerant	Type/Precharge	Oz	R454B / 91.71	R454B / 126.99	R454B / 144.62
Refrigerant precharge	ft	25	25	25	
Additional charge for each ft	oz	0.32	0.32	0.32	
Design pressure	PSIG	550 / 340	550 / 340	550 / 340	
Refrigerant piping	Liquid / Suction	inch	3/8" / 3/4"	3/8" / 3/4"	3/8" / 3/4"
	Max. pipe length	ft	246	246	246
	Max. vertical lift	ft	98	98	98
Ambient Range	Cooling	°F	- 22~122	- 22~122	- 22~122
	Heating	°F	- 22~75	- 22~75	- 22~75

HHHP

Fan Performance

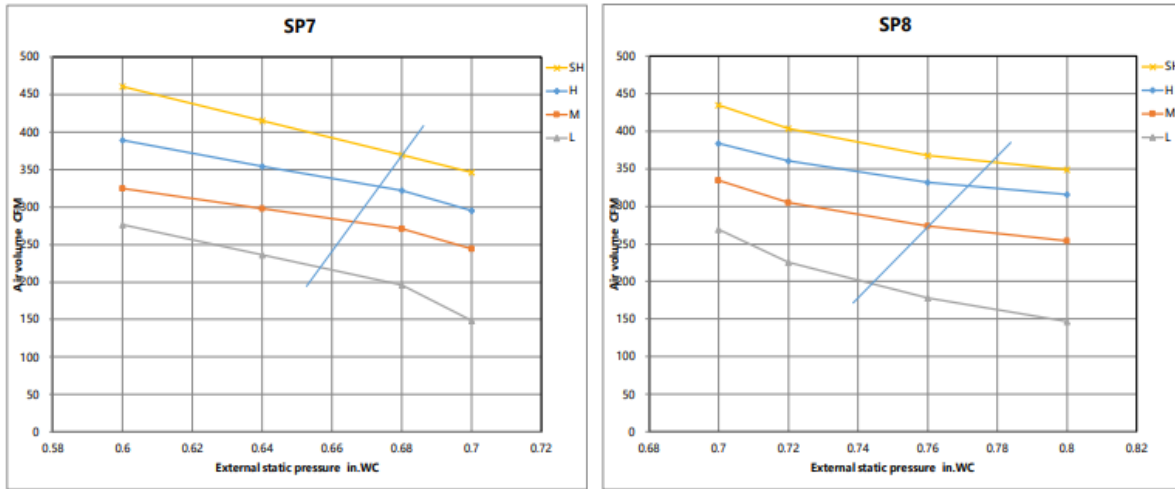
9HHHP0-C-M-B

Multiple Speeds at Various Settings

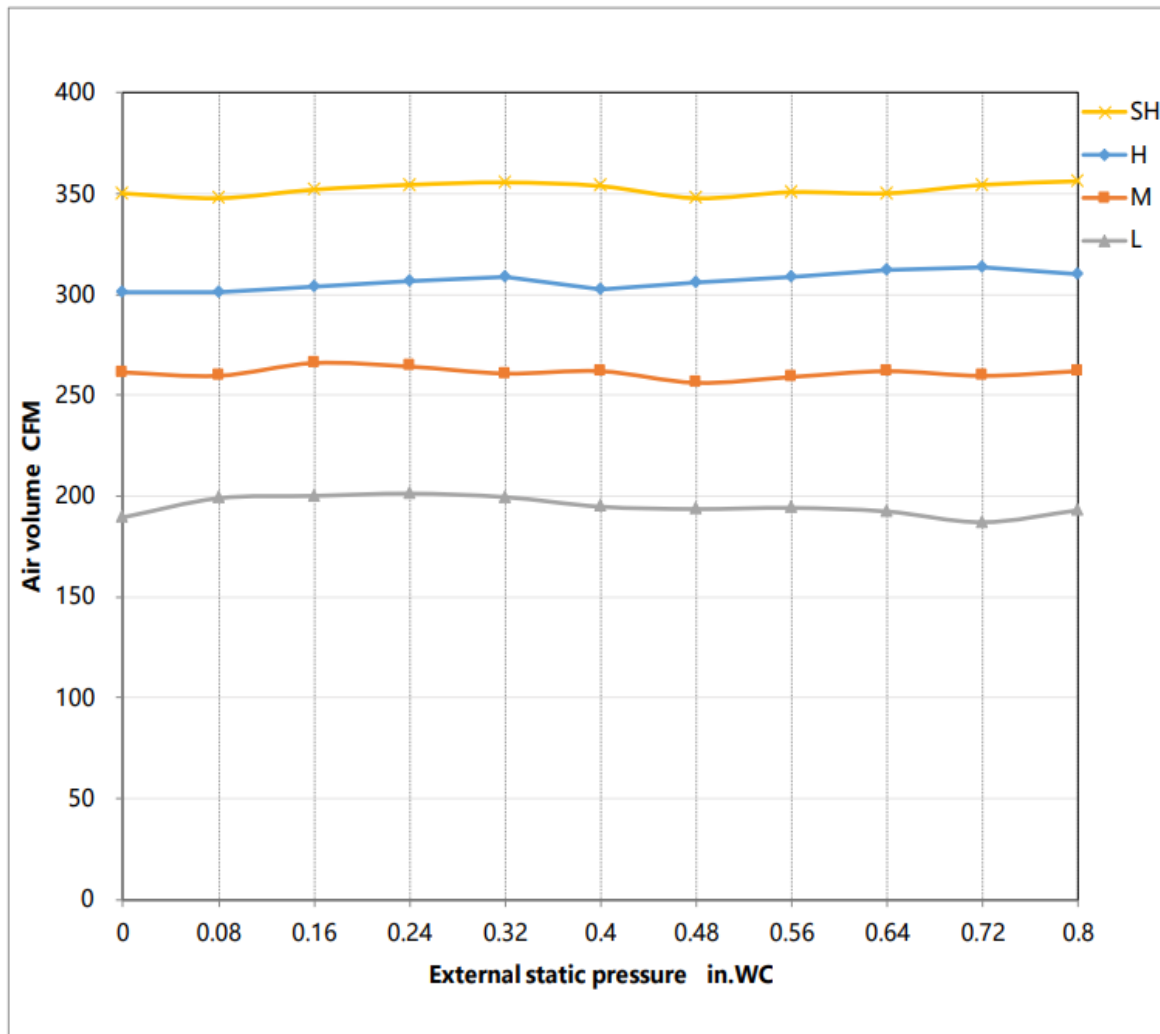


9HHHP0-C-M-B

Multiple Speeds at Various Settings



Constant air volume

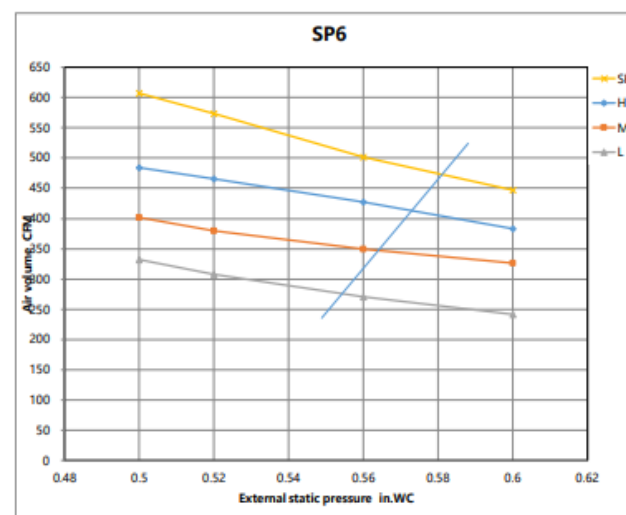
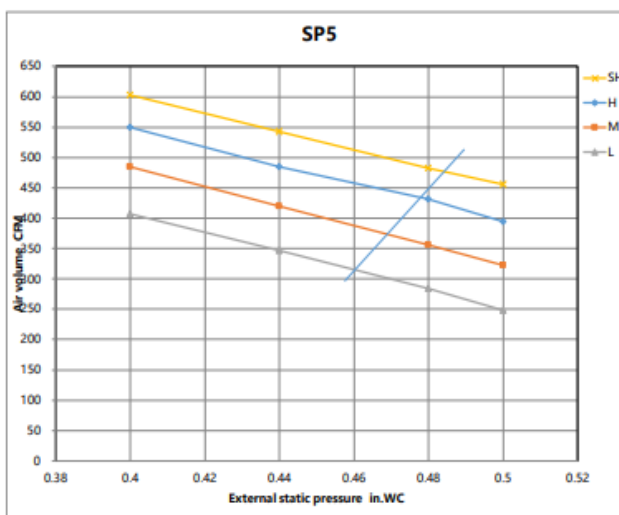
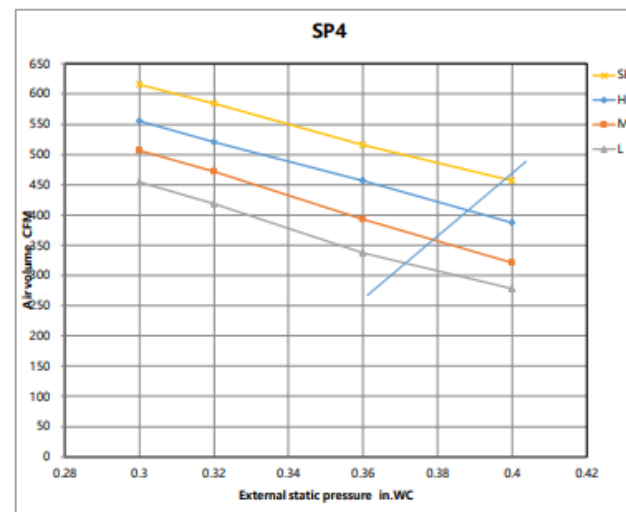
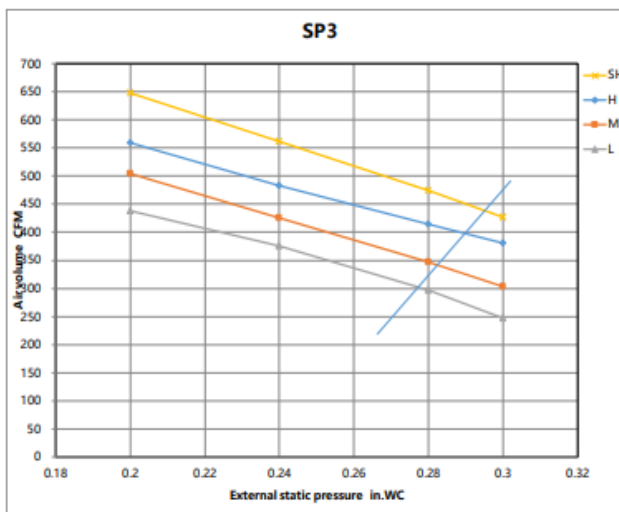
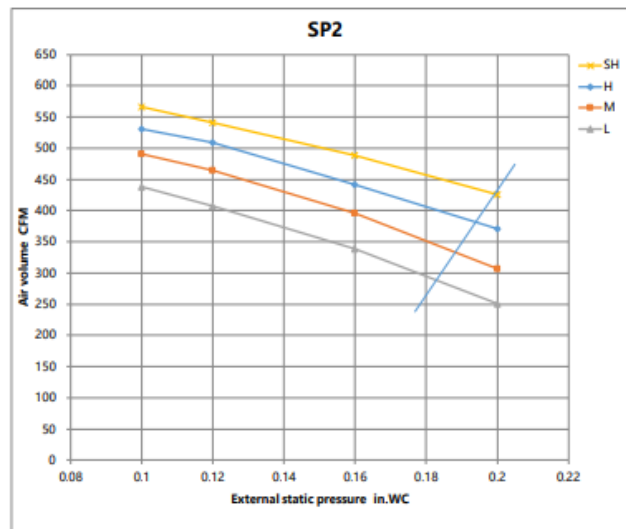
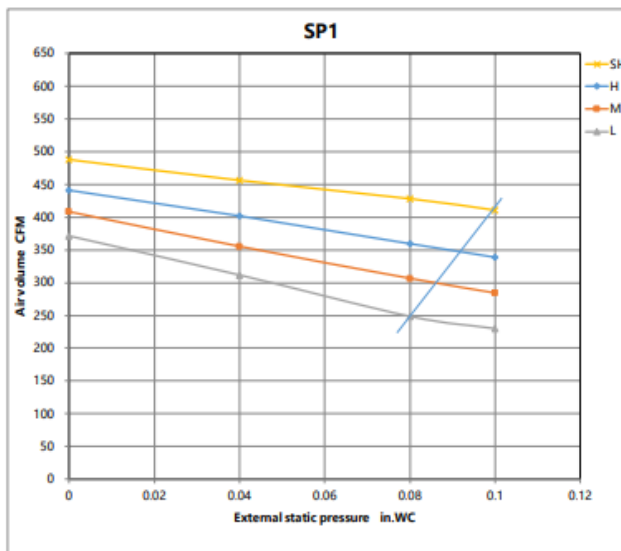


HHHP

Fan Performance

12HHHP0-C-M-B

Multiple Speeds at Various Settings

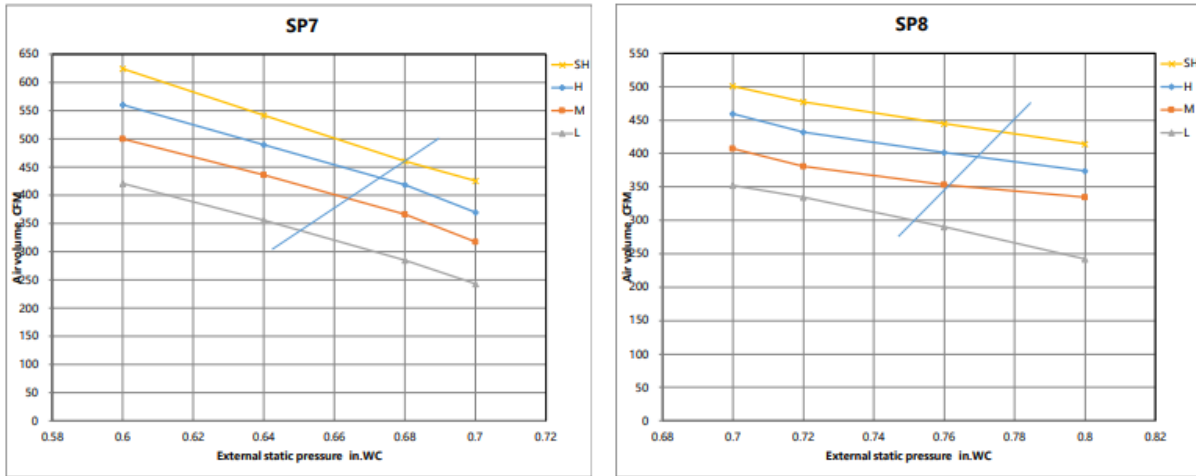


HHHP

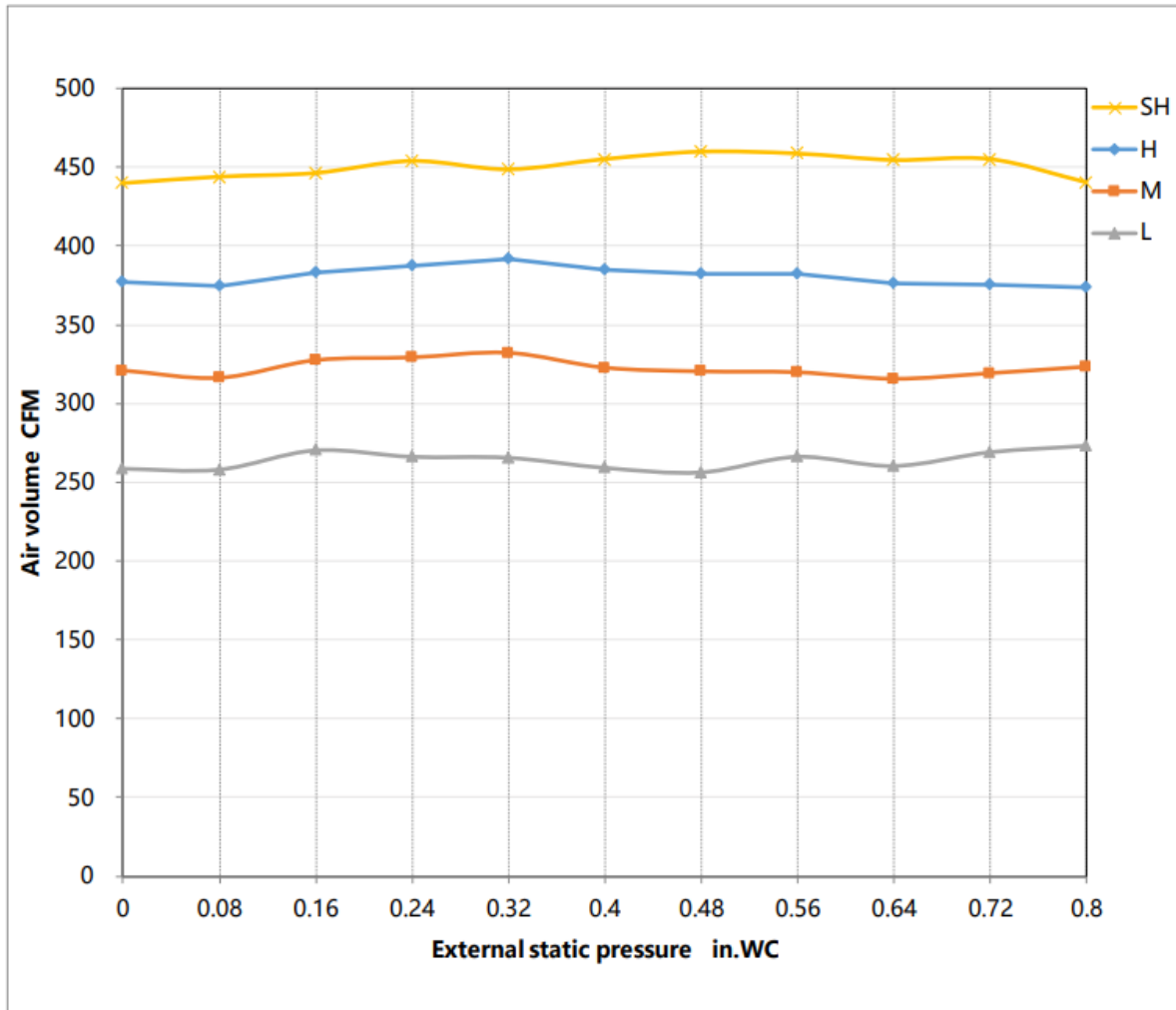
Fan Performance

12HHHP0-C-M-B

Multiple Speeds at Various Settings



Constant air volume

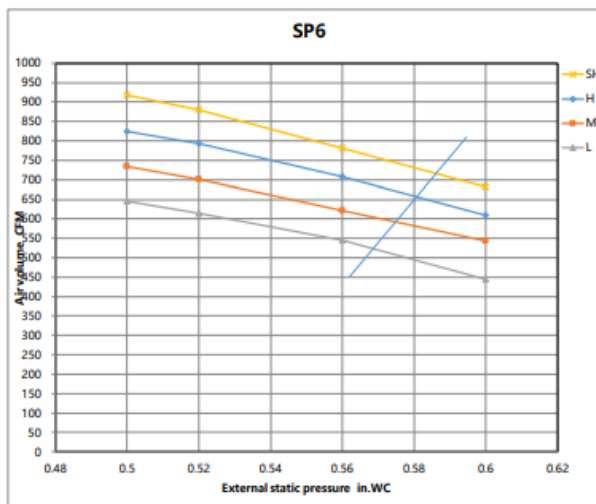
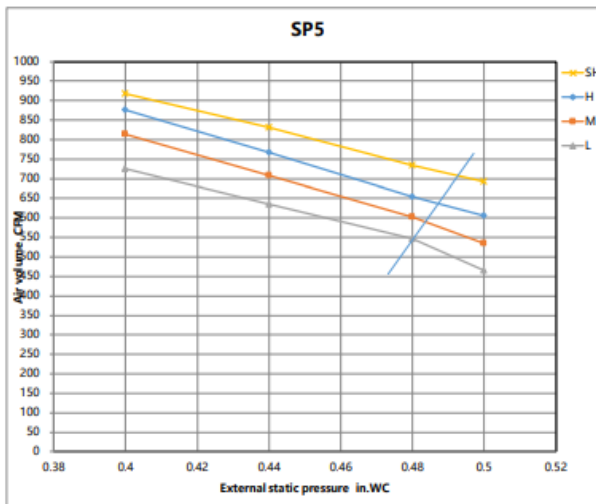
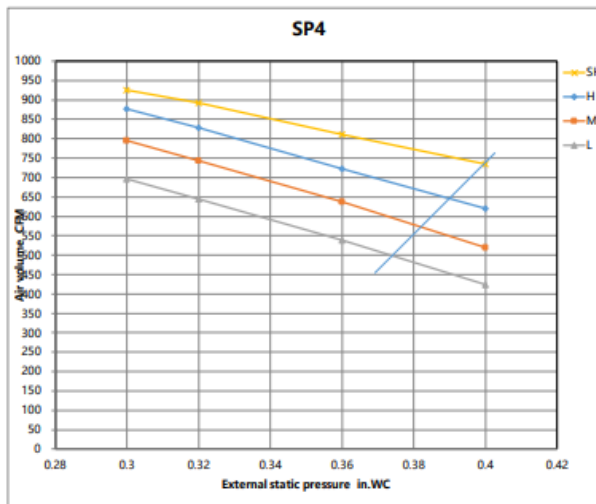
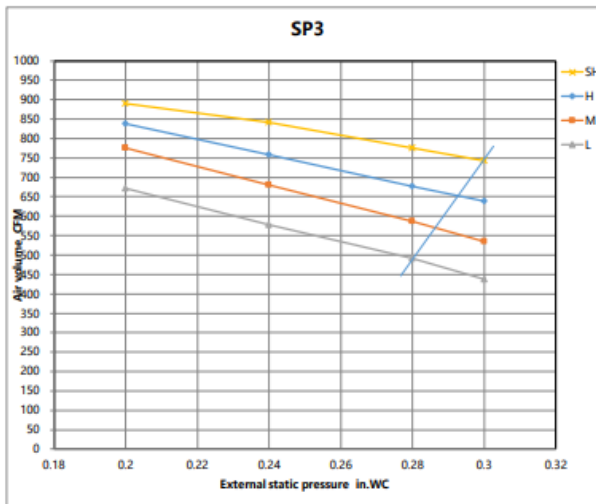
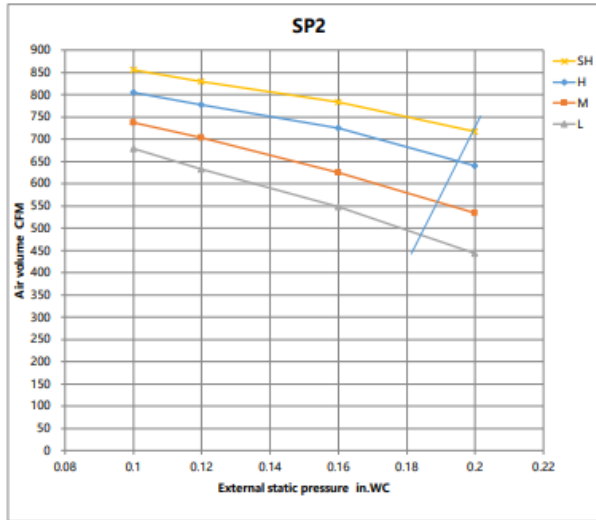
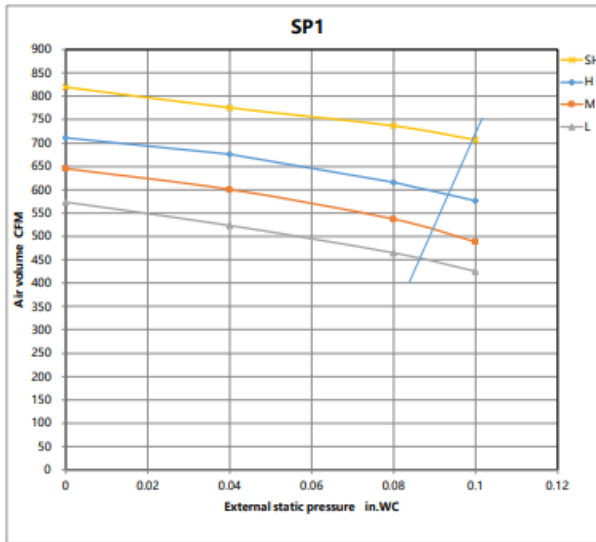


HHHP

Fan Performance

18HHHP0-C-M-B

Multiple Speeds at Various Settings

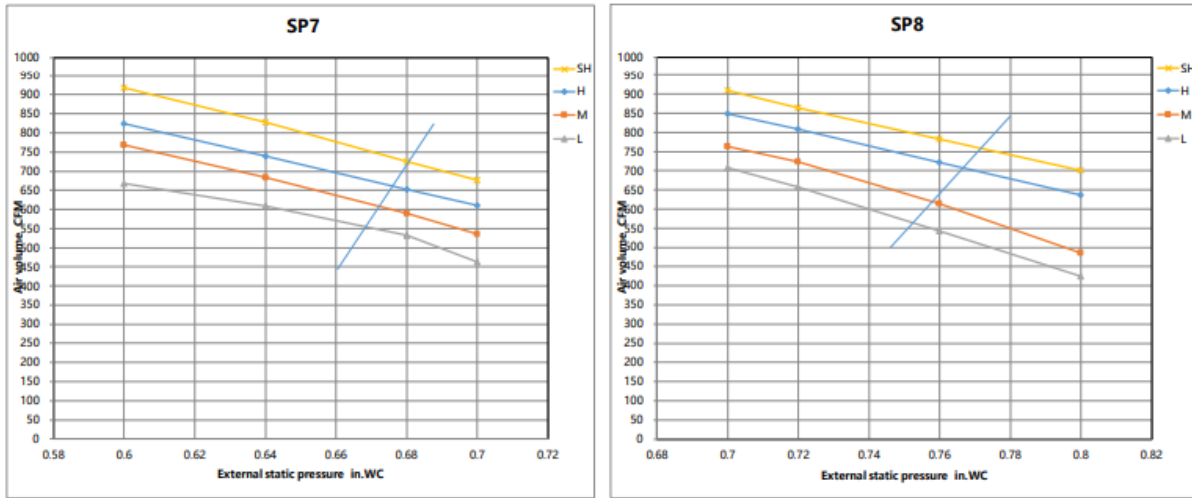


HHHP

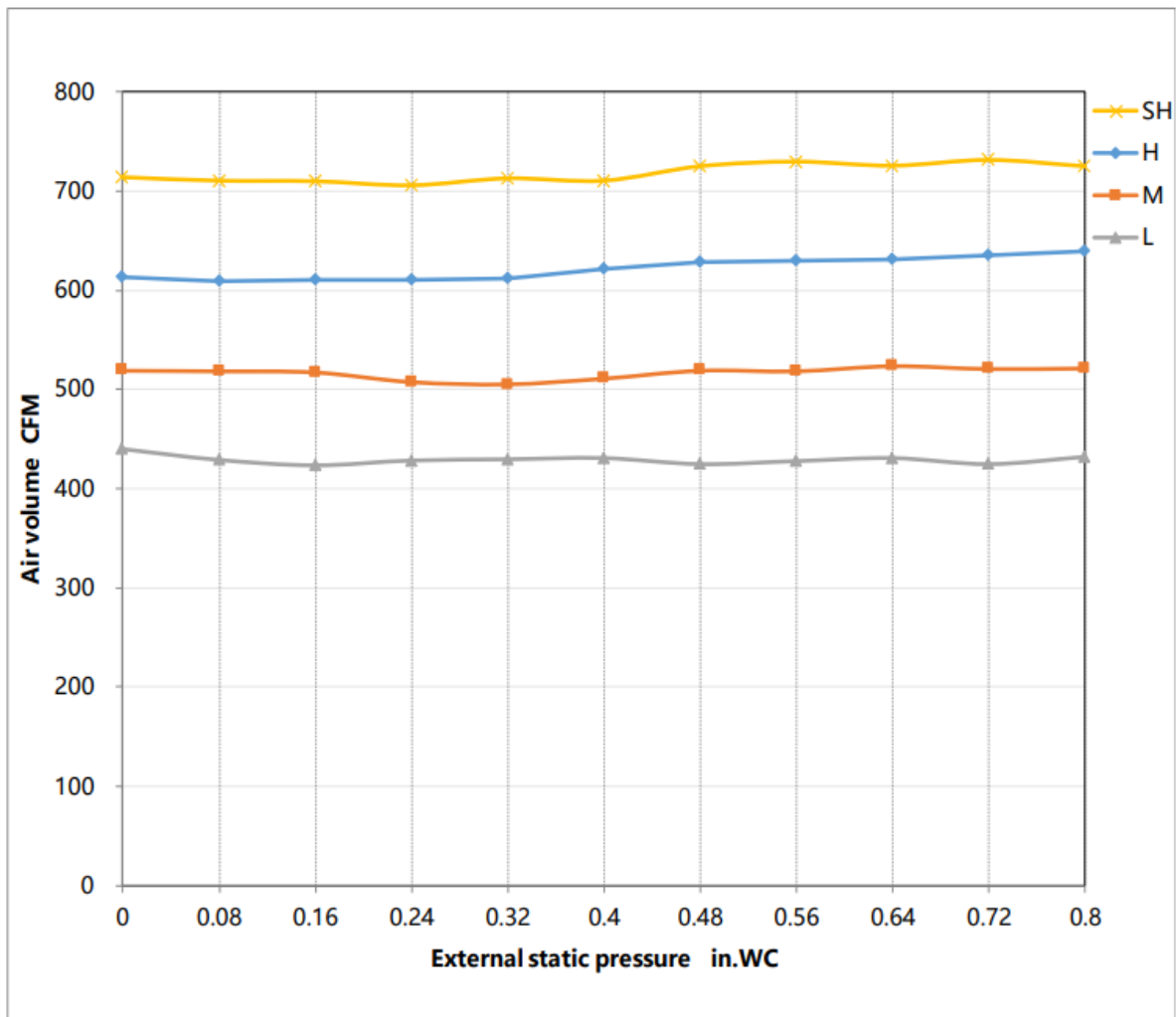
Fan Performance

18HHHP0-C-M-B

Multiple Speeds at Various Settings

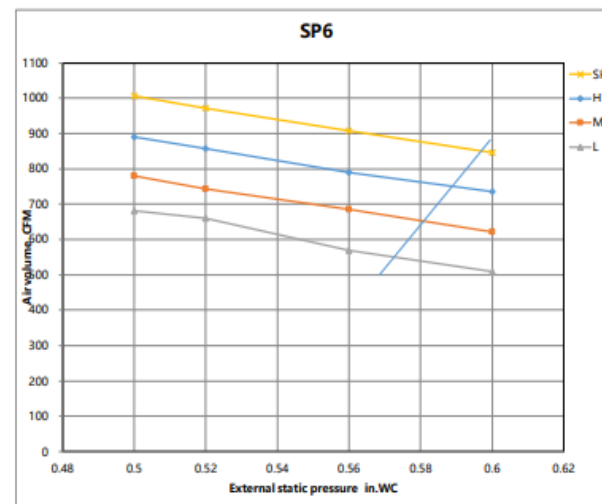
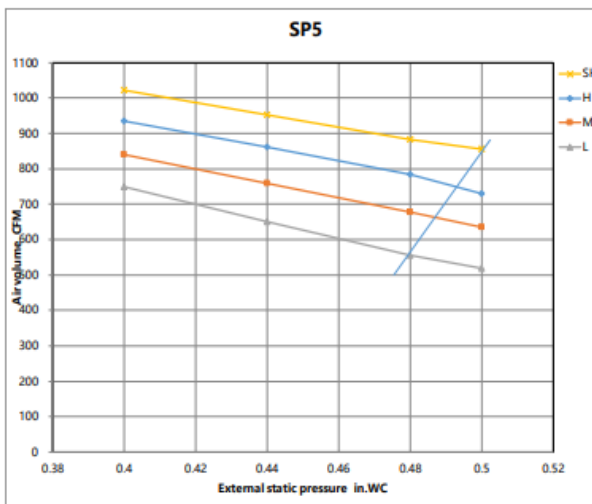
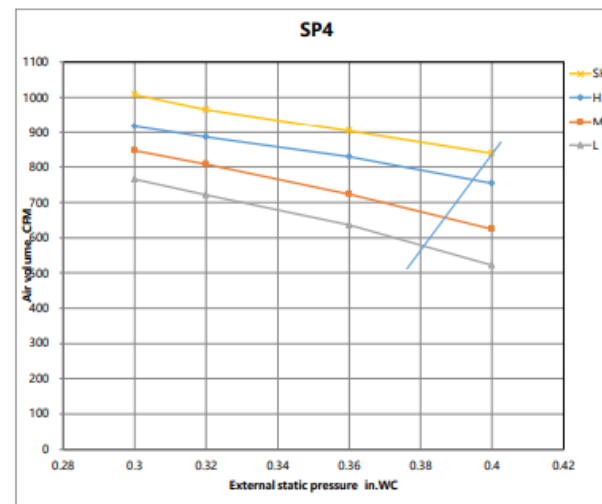
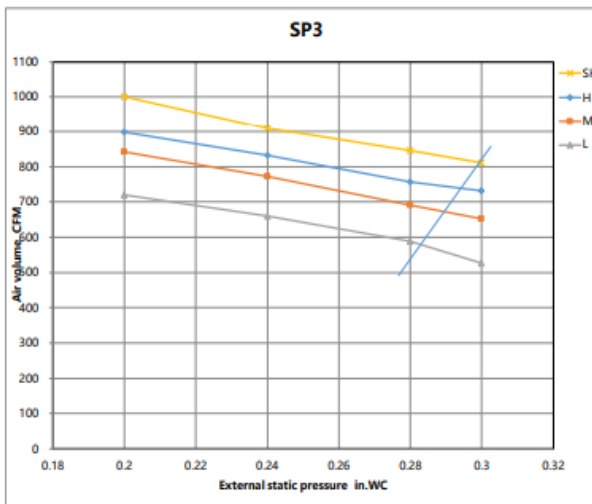
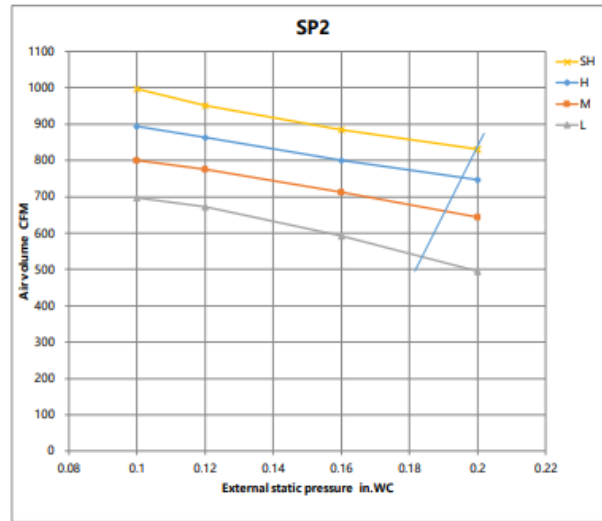
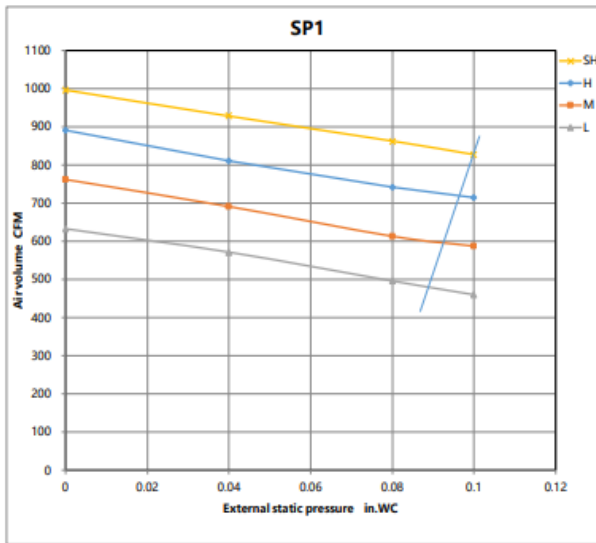


Constant air volume



24HHHP0-C-M-B

Multiple Speeds at Various Settings

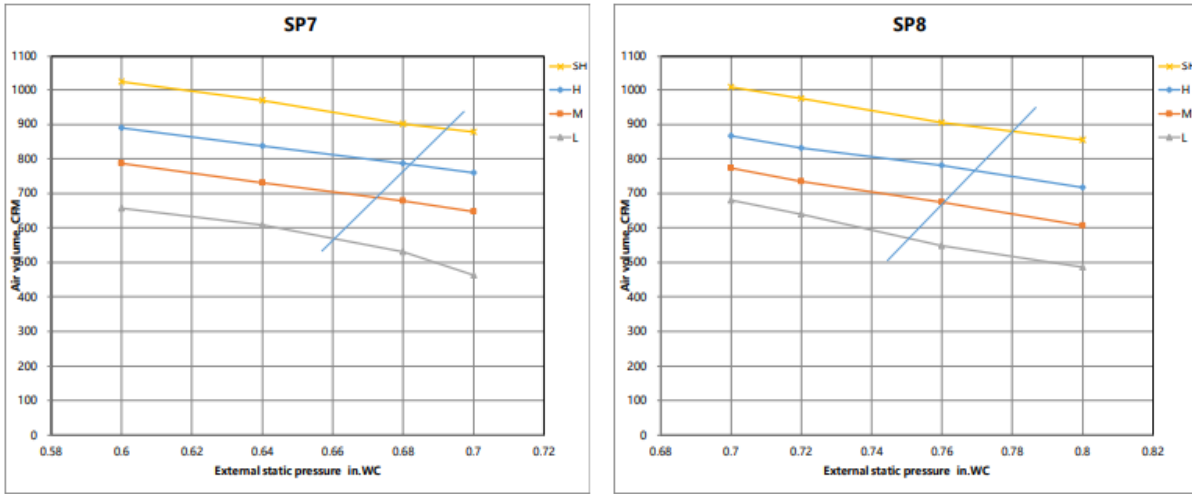


HHHP

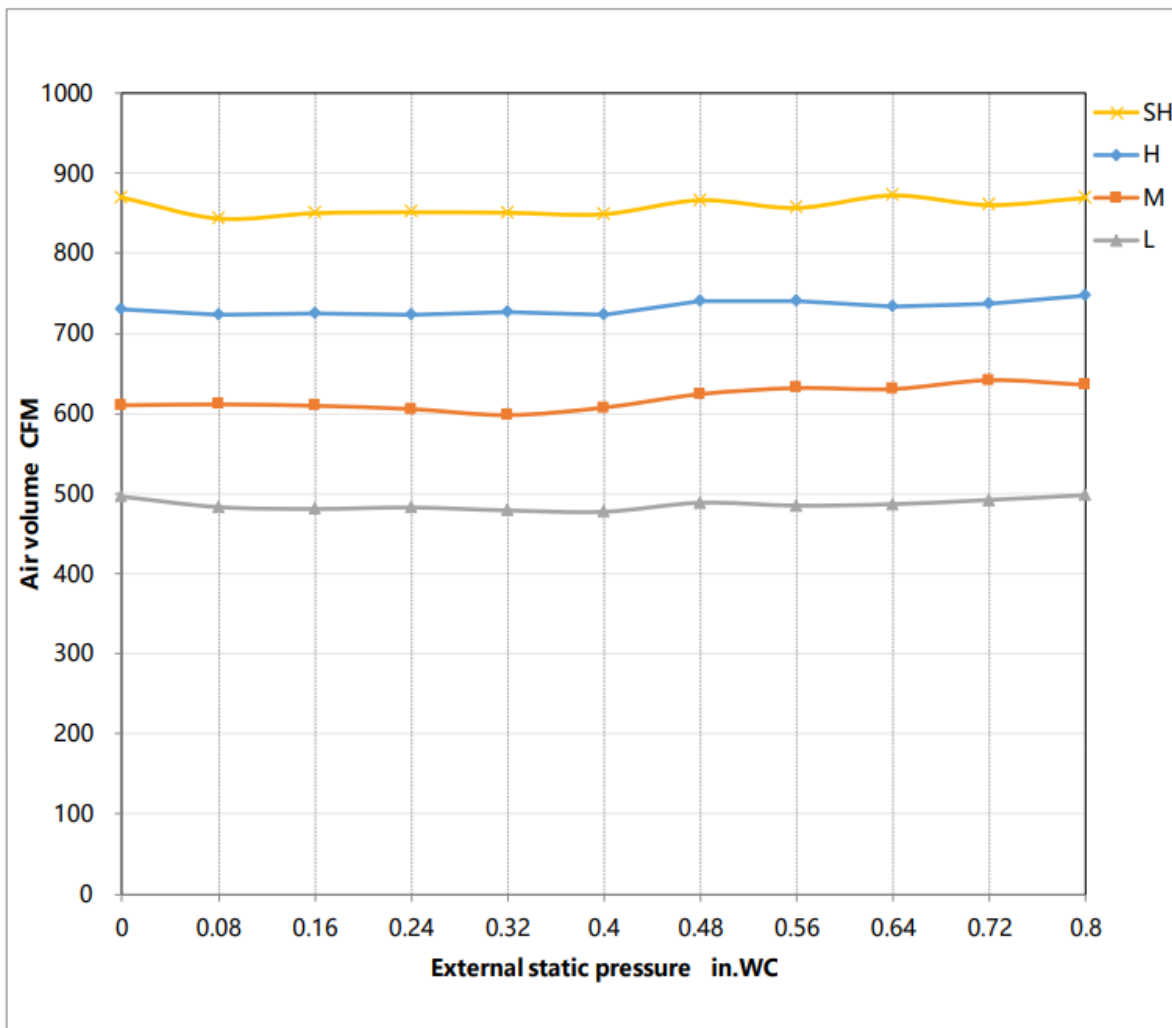
Fan Performance

24HHHP0-C-M-B

Multiple Speeds at Various Settings



Constant air volume

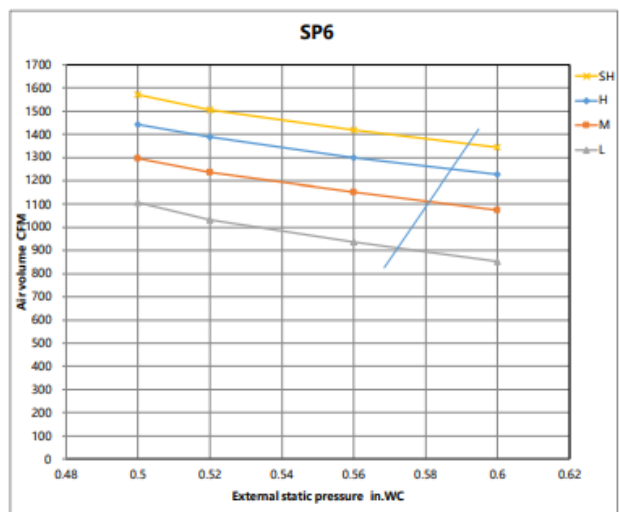
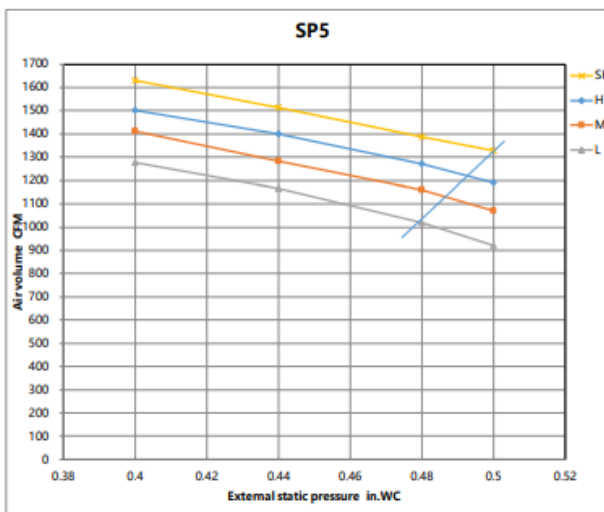
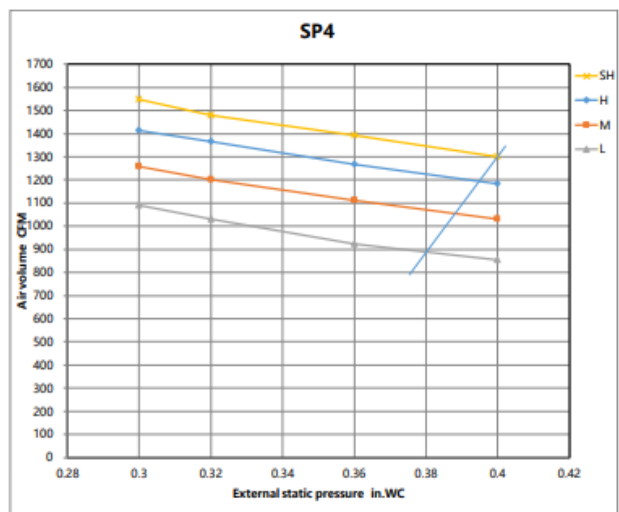
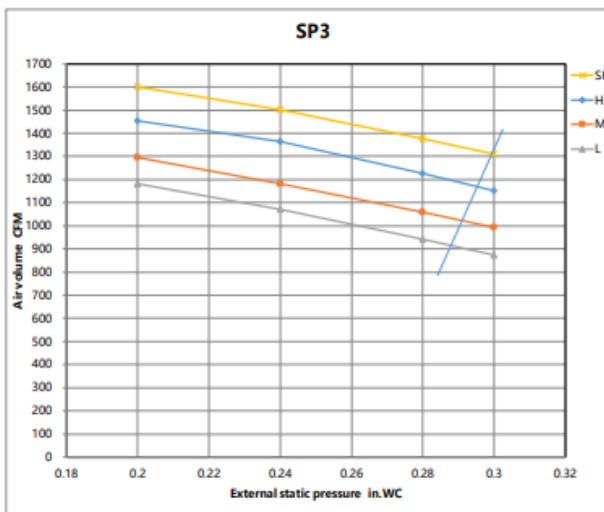
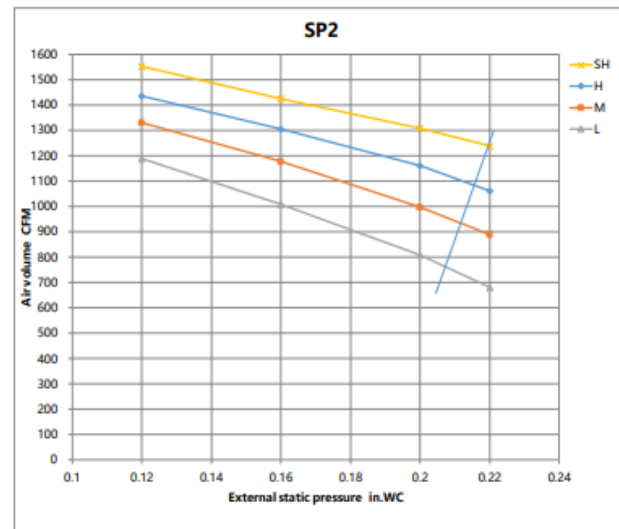
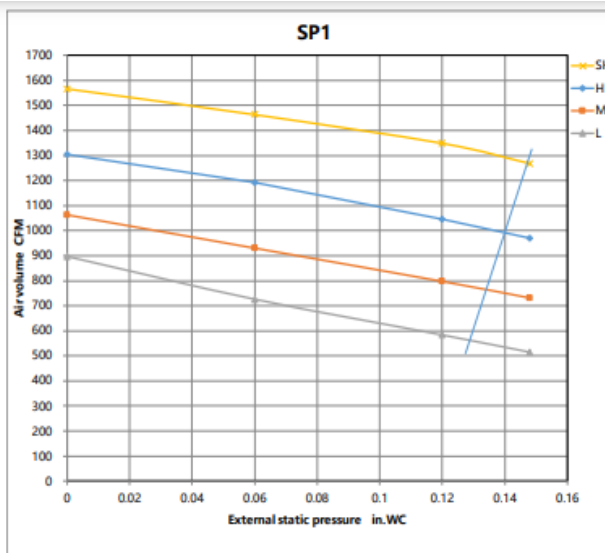


HHHP

Fan Performance

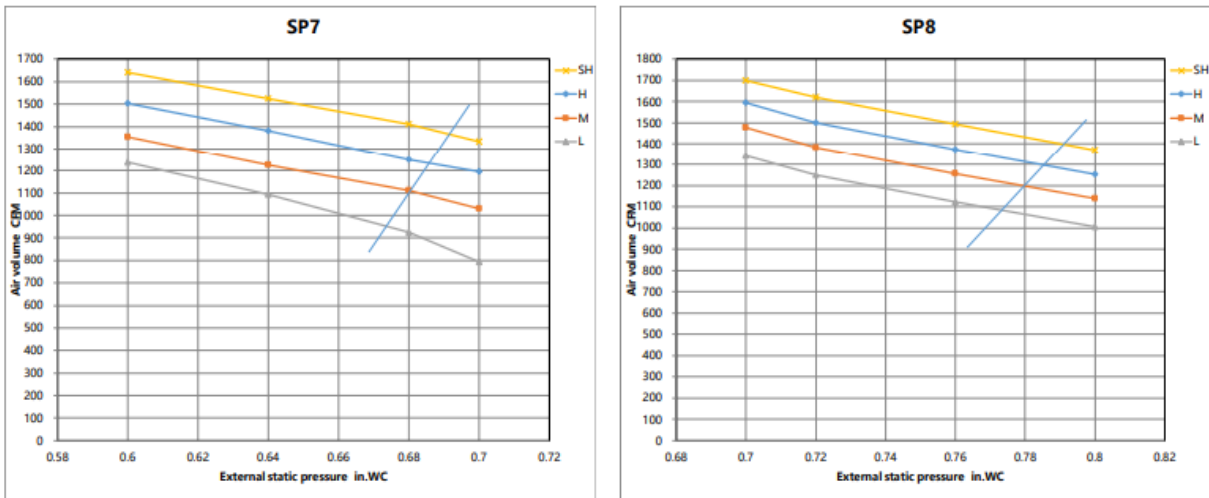
36HHHP0-C-M-B

Multiple Speeds at Various Settings

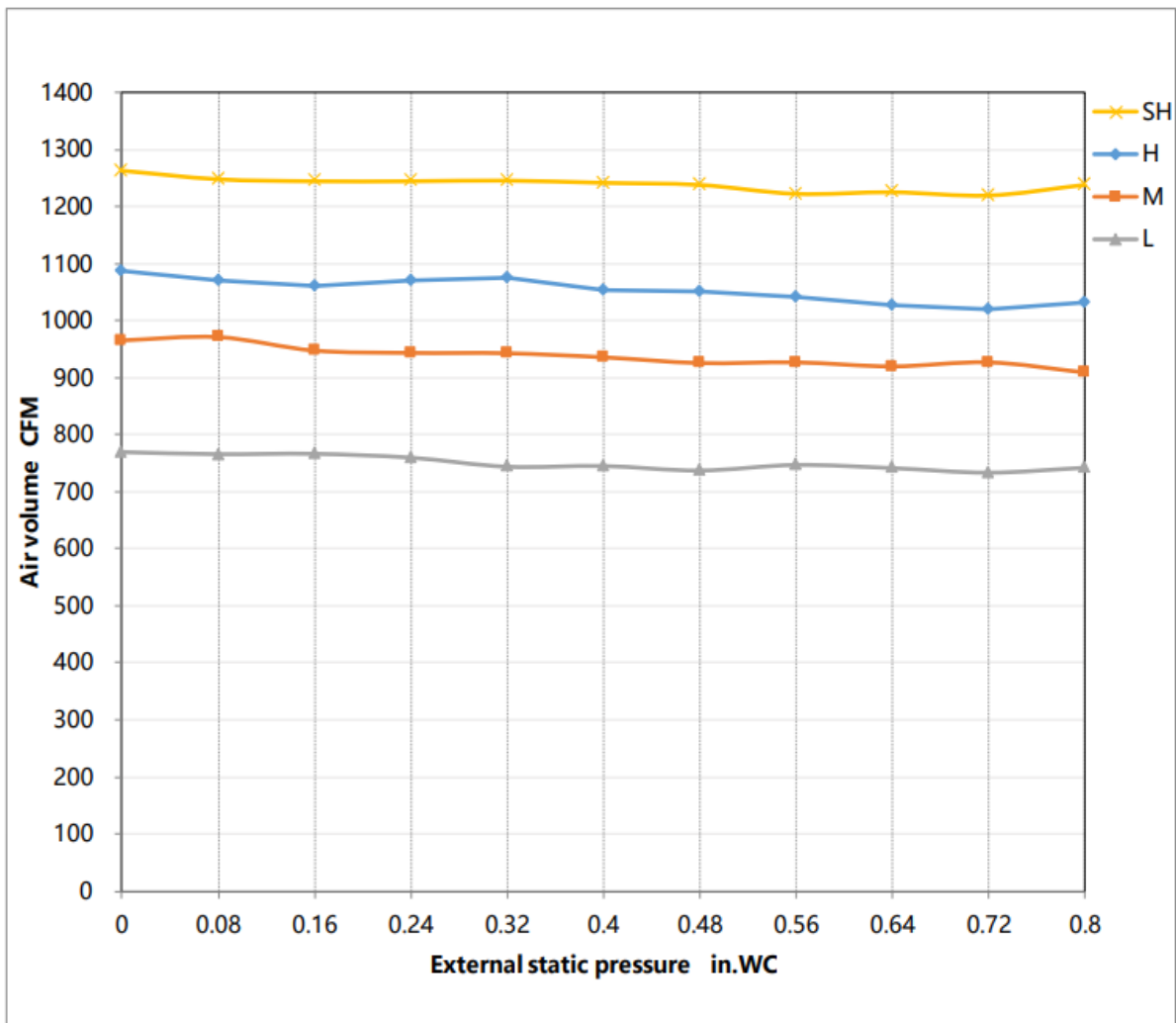


36HHHP0-C-M-B

Multiple Speeds at Various Settings



Constant air volume

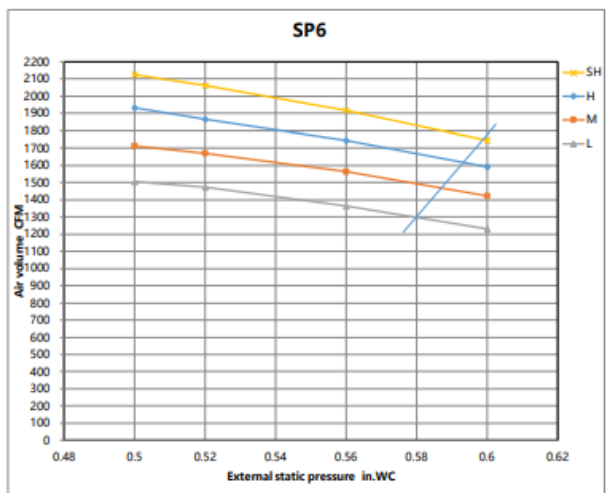
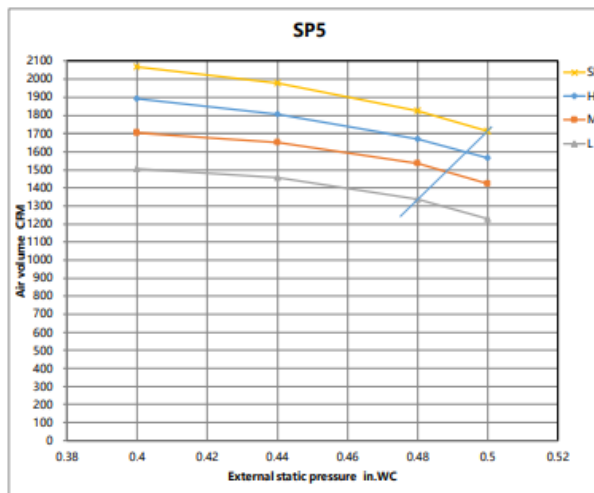
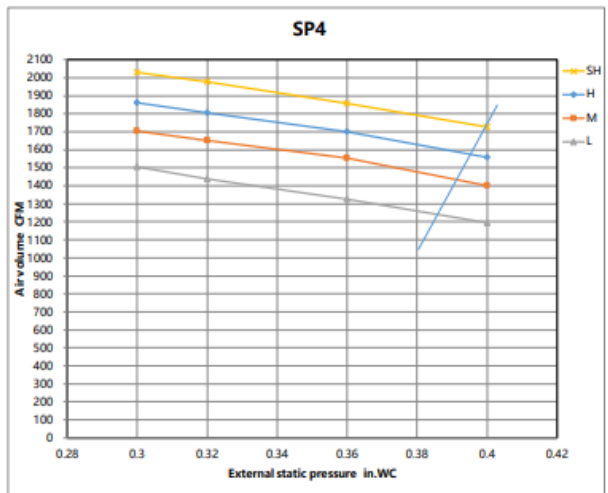
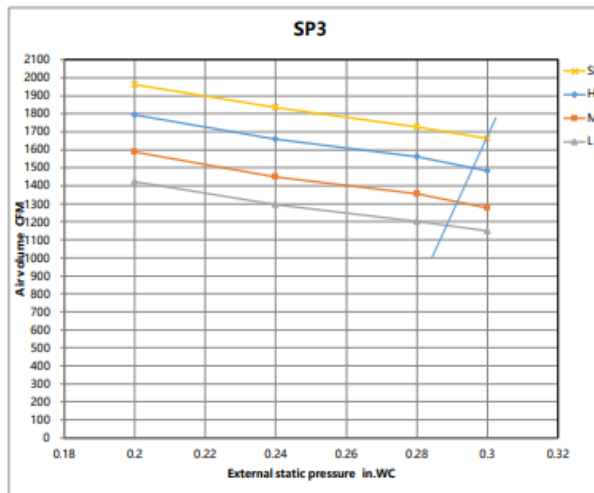
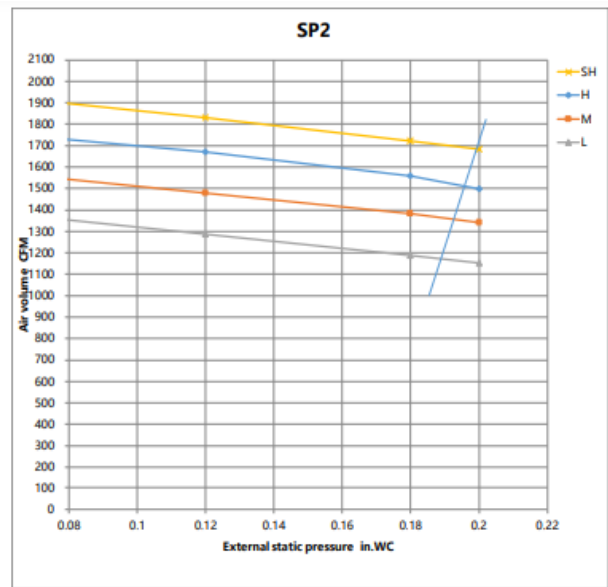
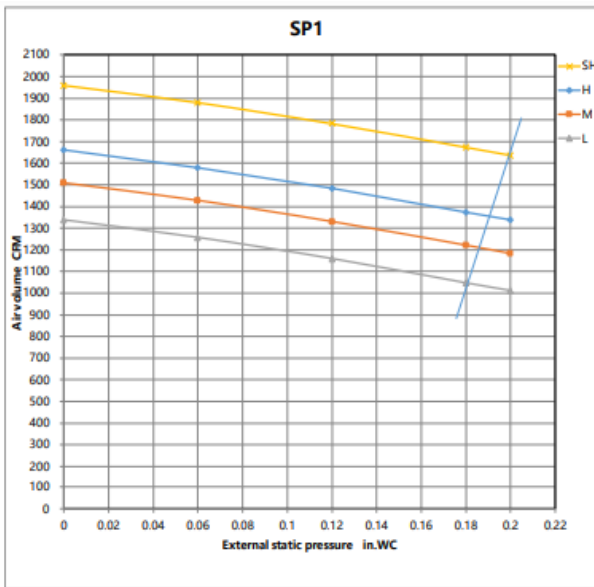


HHHP

Fan Performance

48HHHP0-C-M-B

Multiple Speeds at Various Settings

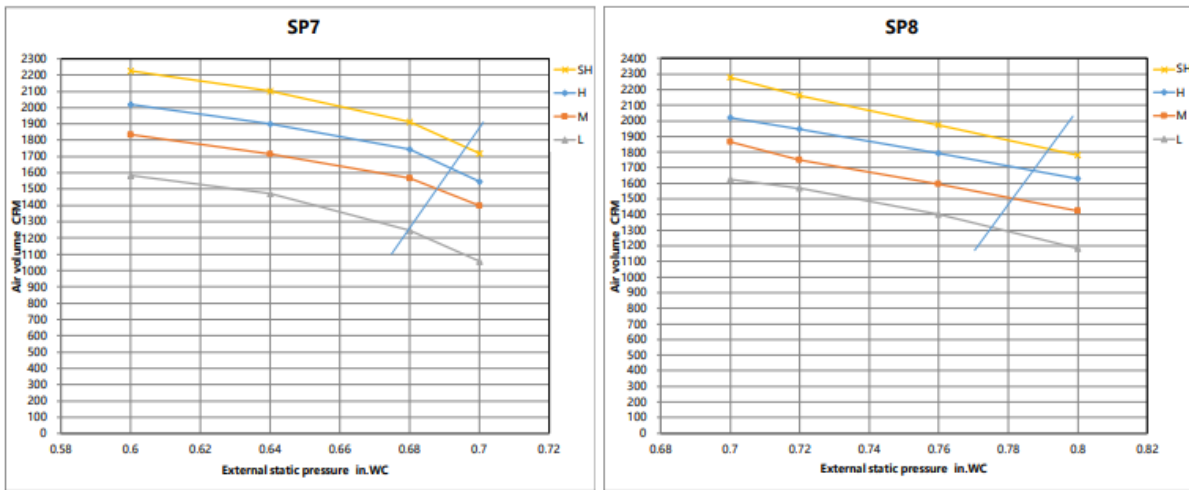


HHHP

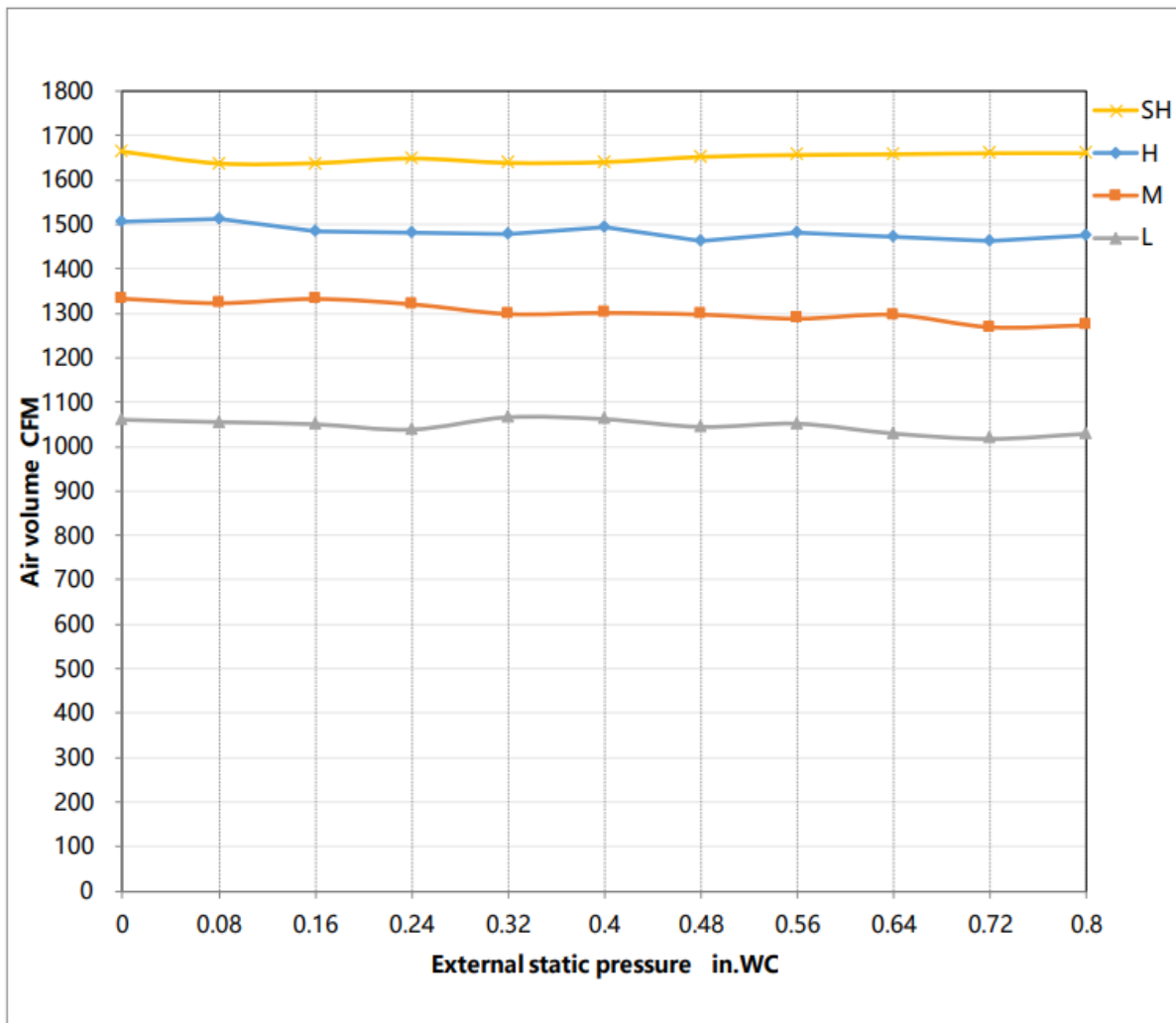
Fan Performance

48HHHP0-C-M-B

Multiple Speeds at Various Settings



Constant air volume

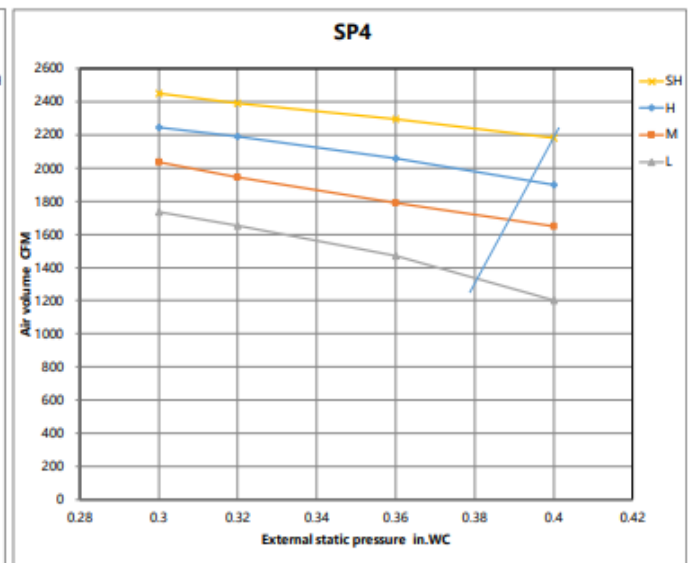
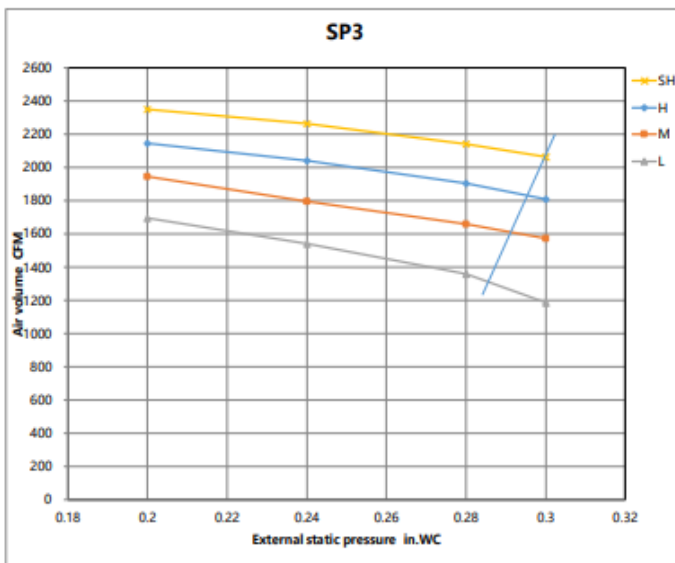
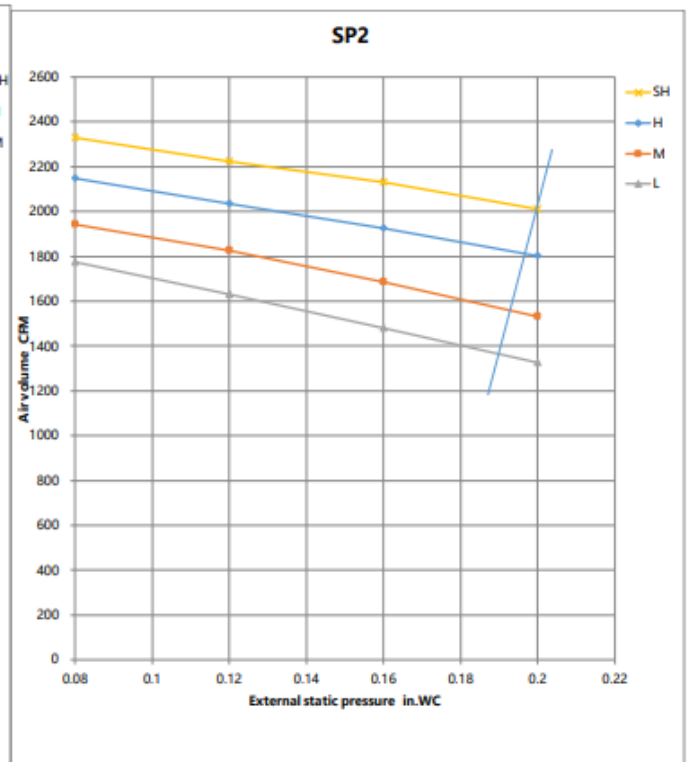
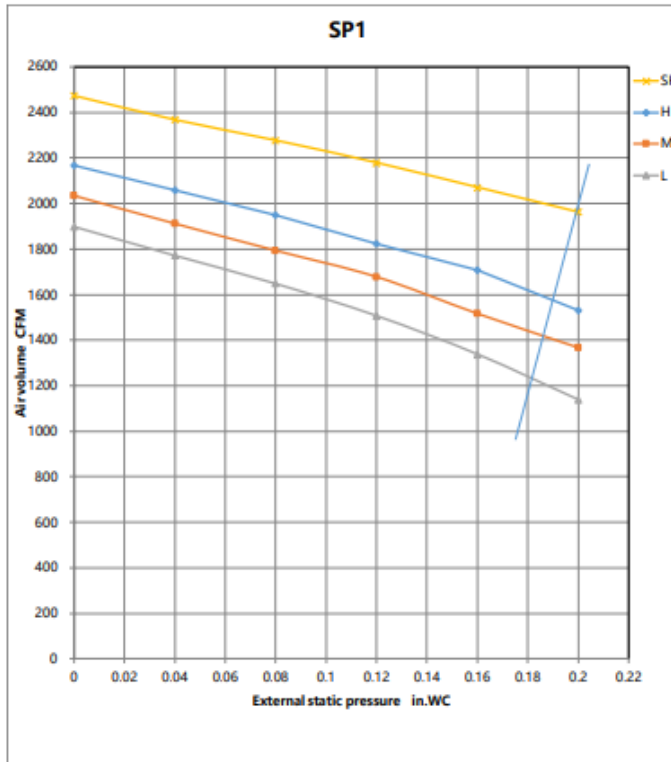


HHHP

Fan Performance

60HHHP0-C-M-B

Multiple Speeds at Various Settings

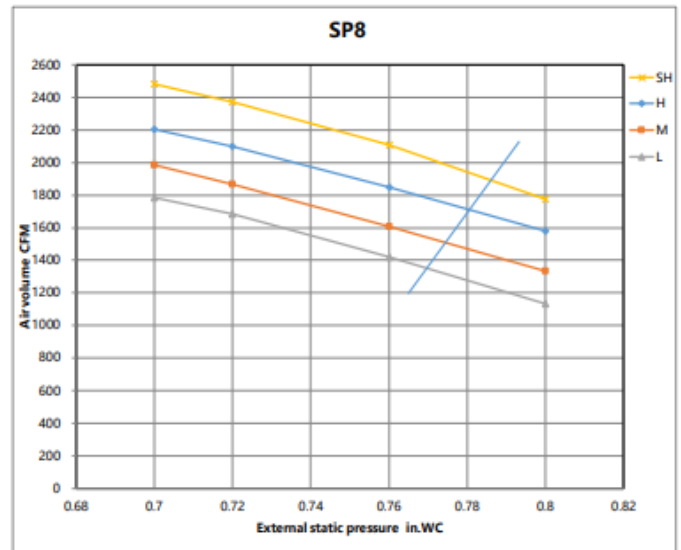
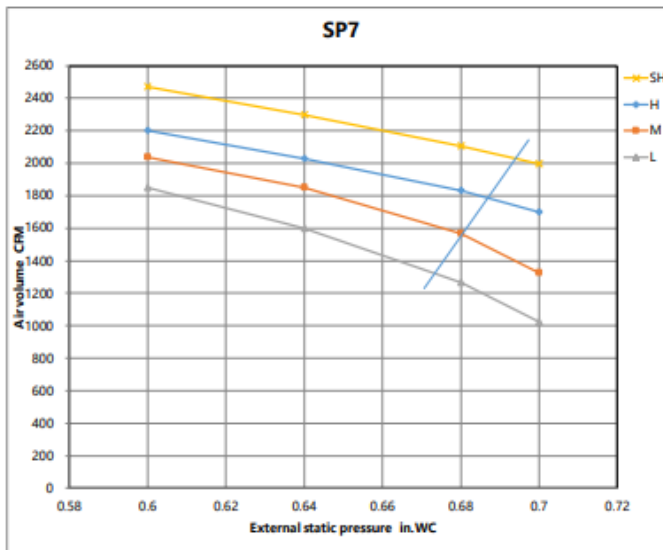
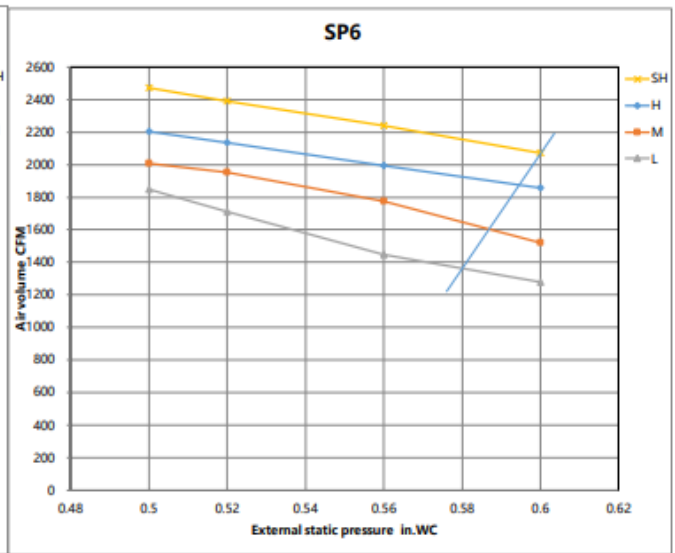
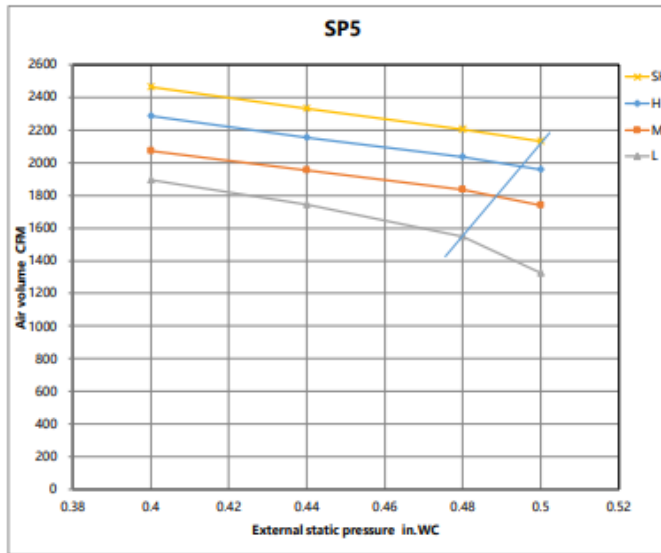


HHHP

Fan Performance

60HHHP0-C-M-B

Multiple Speeds at Various Settings



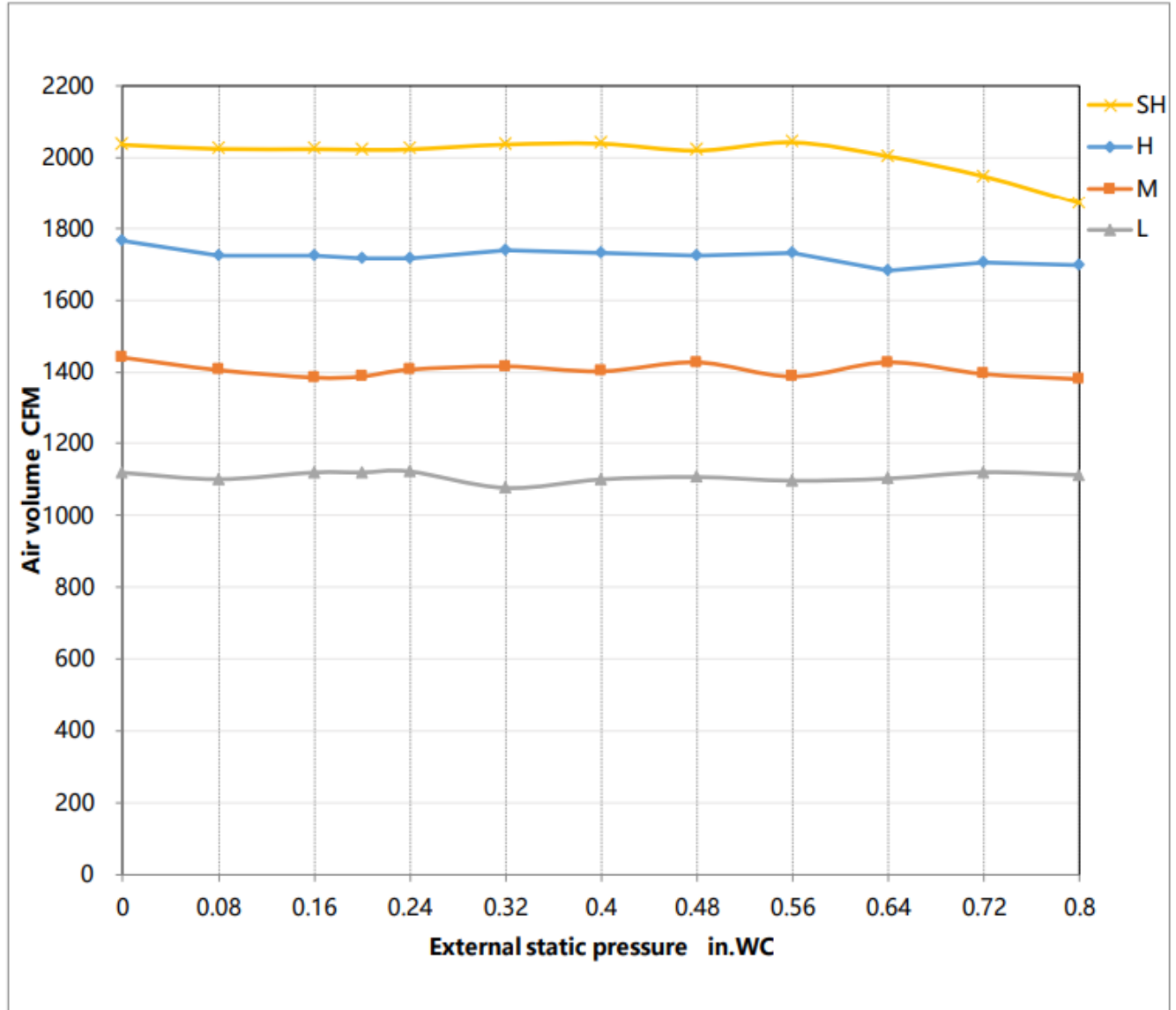
HHHP

Fan Performance

60HHHP0-C-M-B

Multiple Speeds at Various Settings

Constant air volume



HCHP-HE-SYS-B

System Performance

Hyper Heat Systems							
System	Indoor Fan Coil	Outdoor HP	SEER2	EER2	HSPF2	BTU Cooling	BTU Heating
9HHHP0-HE-SYS-B	9HHHP0-C-M-B	MSU-09HD-B	19.70	13.0	11.5	9,000	10,000
12HHHP0-HE-SYS-B	12HHHP0-C-M-B	MSU-12HD-B	19.50	12.0	10.5	12,000	12,000
18HHHP0-HE-SYS-B	18HHHP0-C-M-B	MSU-18HD-B	20.00	13.3	11.3	17,500	20,000
24HHHP0-HE-SYS-B	24HHHP0-C-M-B	MSU-24HD-B	19.00	12.5	11.0	24,000	25,000
36HHHP0-HE-SYS-B	36HHHP0-C-M-B	MSU-36HD-B	18.70	10.1	10.2	36,000	40,000
48HHHP0-HE-SYS-B	48HHHP0-C-M-B	MSU-48HD-B	17.10	10.0	9.8	48,000	50,000
60HHHP0-HE-SYS-B	60HHHP0-C-M-B	MSU-60HD-B	17.00	10.0	9.7	58,000	60,000



9HHHP-HE-SYS-B Expanded Cooling @ 371 CFM

CFM	OD DB (°F)	ID WB ID DB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
371	50°F (10°C)	TC	9433	9446	9456	9456	9469	10001	10013	10023	10025	10037	10599	10613	10625	10627	10638	11238	11250	11262	11264	11278
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	0.45	0.45	0.45	0.45	0.45	0.47	0.48	0.48	0.48	0.48	0.50	0.50	0.50	0.50	0.51	0.53	0.53	0.53	0.53	0.54
	59°F (15°C)	TC	9614	9626	9637	9637	9650	10193	10205	10215	10217	10229	10802	10816	10828	10830	10842	11453	11465	11478	11479	11494
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	0.48	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57
	68°F (20°C)	TC	9794	9807	9818	9818	9832	10384	10397	10407	10409	10421	11005	11019	11031	11033	11046	11668	11681	11693	11695	11710
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	0.51	0.51	0.51	0.51	0.51	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57	0.61	0.61	0.61	0.61	0.61
	77°F (25°C)	TC	9975	9988	9999	9999	10013	10576	10588	10599	10601	10614	11208	11222	11235	11237	11249	11883	11896	11909	11911	11926
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57	0.61	0.61	0.61	0.61	0.61	0.64	0.64	0.64	0.64	0.65
	82°F (27.8°C)	TC	10020	10034	10044	10045	10058	10624	10636	10647	10649	10662	11259	11273	11286	11288	11300	11937	11950	11963	11965	11980
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	0.59	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.63	0.63	0.67	0.67	0.67	0.67	0.67	0.71	0.71	0.71	0.71	0.71
	86°F (30°C)	TC	9987	10000	10011	10011	10025	10589	10601	10612	10614	10626	11221	11236	11248	11250	11263	11897	11910	11923	11925	11940
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	0.68	0.69	0.69	0.69	0.69	0.73	0.73	0.73	0.73	0.73	0.77	0.77	0.77	0.77	0.77	0.82	0.82	0.82	0.82	0.82
	95°F (35°C)	TC	9912	9925	9936	9936	9950	10509	10522	10532	10534	10547	11137	11152	11164	11166	11179	11808	11821	11834	11836	11850
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.06	1.06	1.06	1.06	1.06
	104°F (40°C)	TC	9094	9106	9116	9116	9129	9642	9654	9663	9665	9676	10218	10231	10243	10245	10256	10834	10846	10857	10859	10873
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	0.93	0.93	0.94	0.94	0.94	0.99	0.99	0.99	0.99	0.99	1.05	1.05	1.05	1.05	1.05	1.11	1.11	1.11	1.11	1.12
110°F (43°C)	TC	8603	8615	8624	8625	8636	9122	9133	9142	9143	9154	9667	9679	9690	9692	9703	10249	10260	10271	10273	10286	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	0.96	0.96	0.96	0.96	0.96	1.02	1.02	1.02	1.02	1.02	1.08	1.08	1.08	1.08	1.08	1.14	1.14	1.15	1.15	1.15	
115°F (46°C)	TC	7611	7622	7630	7630	7640	8070	8080	8088	8089	8099	8552	8563	8573	8574	8584	9068	9077	9087	9089	9100	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	1.01	1.01	1.01	1.01	1.01	1.07	1.07	1.07	1.07	1.07	
122°F (50°C)	TC	6289	6297	6304	6304	6313	6668	6676	6682	6684	6692	7066	7075	7083	7085	7093	7492	7500	7508	7509	7519	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	0.81	0.82	0.82	0.82	0.82	0.86	0.86	0.87	0.87	0.87	0.91	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.97	0.97	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

9HHHP-HE-SYS-B Expanded Heating @ 371 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
371	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	5781	5665	5637	5614	5564	0.95	0.96	0.96	0.96	0.97
	-4°F	6722	6587	6554	6528	6469	0.98	0.99	0.99	0.99	1.00
	0°F	7518	7368	7331	7302	7236	1.01	1.02	1.02	1.02	1.02
	5°F	8513	8343	8301	8268	8194	1.04	1.05	1.05	1.06	1.06
	14°F	9608	9416	9368	9331	9247	1.11	1.12	1.12	1.12	1.13
	17°F	9973	9773	9724	9685	9598	1.13	1.14	1.14	1.15	1.15
	22°F	10232	10027	9977	9937	9848	1.17	1.18	1.18	1.18	1.19
	27°F	10492	10282	10230	10189	10098	1.20	1.21	1.22	1.22	1.22
	32°F	10751	10536	10483	10441	10347	1.24	1.25	1.25	1.26	1.26
	35°F	10907	10689	10635	10593	10497	1.26	1.27	1.28	1.28	1.28
	37°F	11576	11344	11287	11242	11141	1.24	1.25	1.25	1.25	1.26
	42°F	13248	12983	12918	12866	12751	1.18	1.19	1.19	1.20	1.20
	44.6°F	13917	13639	13570	13516	13394	1.16	1.17	1.17	1.17	1.18
	47°F	14920	14622	14549	14491	14360	1.12	1.13	1.13	1.14	1.14
	52°F	14548	14257	14185	14129	14002	1.05	1.05	1.06	1.06	1.06
	57°F	14175	13892	13822	13767	13643	0.97	0.98	0.98	0.98	0.98
	59°F	14026	13746	13677	13622	13500	0.94	0.95	0.95	0.95	0.95
62°F	13803	13527	13459	13405	13284	0.89	0.90	0.90	0.90	0.91	
64.4°F	13654	13381	13314	13260	13141	0.86	0.87	0.87	0.87	0.88	

12HHHP-HE-SYS-B Expanded Cooling @ 418 CFM

CFM	OD DB (°F)	ID WB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
418	50°F (10°C)	TC	11000	11015	11027	11028	11042	11663	11677	11689	11691	11705	12360	12376	12390	12392	12406	13105	13119	13133	13135	13152
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	0.44	0.45	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47	0.50	0.50	0.50	0.50	0.50	0.53	0.53	0.53	0.53	0.53
	59°F (15°C)	TC	10831	10845	10857	10857	10872	11483	11497	11508	11510	11524	12169	12185	12199	12201	12215	12903	12917	12931	12933	12949
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	0.48	0.48	0.48	0.48	0.48	0.51	0.51	0.51	0.51	0.51	0.54	0.54	0.54	0.54	0.54	0.57	0.57	0.57	0.57	0.57
	68°F (20°C)	TC	10661	10675	10686	10687	10701	11303	11316	11328	11330	11343	11978	11994	12007	12010	12023	12700	12714	12728	12730	12746
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	0.51	0.51	0.51	0.51	0.52	0.54	0.54	0.55	0.55	0.55	0.58	0.58	0.58	0.58	0.58	0.61	0.61	0.61	0.61	0.61
	77°F (25°C)	TC	10491	10505	10516	10517	10531	11123	11136	11147	11149	11163	11788	11803	11816	11818	11831	12498	12511	12525	12527	12542
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	0.55	0.55	0.55	0.55	0.55	0.58	0.58	0.58	0.58	0.58	0.62	0.62	0.62	0.62	0.62	0.65	0.65	0.65	0.65	0.65
	82°F (27.8°C)	TC	10520	10534	10545	10546	10560	11153	11167	11178	11180	11193	11820	11835	11848	11851	11864	12532	12546	12559	12561	12577
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	0.63	0.63	0.63	0.63	0.63	0.66	0.66	0.67	0.67	0.67	0.70	0.70	0.71	0.71	0.71	0.75	0.75	0.75	0.75	0.75
	86°F (30°C)	TC	10698	10712	10724	10724	10739	11343	11356	11367	11370	11383	12020	12036	12049	12052	12065	12745	12758	12772	12774	12790
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	0.76	0.77	0.77	0.77	0.77	0.81	0.81	0.81	0.81	0.81	0.86	0.86	0.86	0.86	0.86	0.91	0.91	0.91	0.91	0.91
	95°F (35°C)	TC	11099	11114	11126	11127	11142	11768	11782	11794	11796	11810	12471	12488	12502	12504	12518	13223	13237	13252	13254	13270
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	1.07	1.08	1.08	1.08	1.08	1.14	1.14	1.14	1.14	1.14	1.21	1.21	1.21	1.21	1.21	1.28	1.28	1.28	1.28	1.28
	104°F (40°C)	TC	9927	9941	9952	9952	9965	10526	10538	10549	10551	10563	11155	11169	11182	11184	11196	11827	11840	11852	11854	11869
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	1.06	1.06	1.06	1.06	1.07	1.13	1.13	1.13	1.13	1.13	1.19	1.19	1.20	1.20	1.20	1.26	1.27	1.27	1.27	1.27
110°F (43°C)	TC	9224	9237	9247	9247	9260	9780	9792	9801	9803	9815	10365	10378	10390	10391	10403	10989	11001	11013	11015	11028	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	1.05	1.06	1.06	1.06	1.06	1.12	1.12	1.12	1.12	1.12	1.18	1.19	1.19	1.19	1.19	1.26	1.26	1.26	1.26	1.26	
115°F (46°C)	TC	8230	8241	8250	8250	8261	8726	8736	8745	8746	8757	9247	9259	9269	9271	9281	9804	9815	9826	9827	9839	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	0.96	0.96	0.96	0.96	0.96	1.02	1.02	1.02	1.02	1.02	1.08	1.08	1.08	1.08	1.08	1.14	1.14	1.15	1.15	1.15	
122°F (50°C)	TC	6904	6913	6921	6921	6930	7320	7329	7336	7337	7346	7757	7767	7776	7777	7786	8225	8234	8243	8244	8254	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	0.83	0.83	0.84	0.84	0.84	0.88	0.88	0.89	0.89	0.89	0.94	0.94	0.94	0.94	0.94	0.99	0.99	1.00	1.00	1.00	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

12HHHP-HE-SYS-B Expanded Heating @ 418 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
418	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	5921	5802	5773	5750	5698	0.96	0.96	0.97	0.97	0.97
	-4°F	7215	7071	7036	7007	6944	1.02	1.03	1.03	1.03	1.04
	0°F	8064	7903	7864	7832	7762	1.05	1.05	1.06	1.06	1.06
	5°F	9126	8943	8898	8863	8783	1.08	1.08	1.09	1.09	1.09
	14°F	9805	9609	9561	9523	9437	1.11	1.12	1.13	1.13	1.13
	17°F	10032	9831	9782	9743	9655	1.13	1.14	1.14	1.14	1.14
	22°F	10415	10207	10156	10115	10024	1.15	1.16	1.16	1.16	1.17
	27°F	10798	10582	10529	10487	10393	1.17	1.18	1.18	1.19	1.19
	32°F	11181	10957	10902	10859	10761	1.19	1.20	1.21	1.21	1.21
	35°F	11411	11182	11127	11082	10982	1.21	1.22	1.22	1.22	1.23
	37°F	12189	11945	11886	11838	11732	1.23	1.24	1.25	1.25	1.25
	42°F	14136	13853	13784	13728	13605	1.30	1.31	1.31	1.31	1.32
	44.6°F	14914	14616	14543	14485	14354	1.33	1.34	1.34	1.34	1.35
	47°F	16082	15760	15682	15619	15478	1.37	1.38	1.38	1.38	1.39
	52°F	15646	15333	15256	15195	15058	1.19	1.20	1.20	1.20	1.21
	57°F	15209	14905	14831	14771	14638	1.01	1.02	1.02	1.02	1.02
	59°F	15035	14734	14660	14602	14470	0.94	0.94	0.95	0.95	0.95
62°F	14773	14477	14405	14347	14218	0.83	0.84	0.84	0.84	0.84	
64.4°F	14598	14306	14235	14178	14050	0.76	0.76	0.77	0.77	0.77	

18HHHP-HE-SYS-B Expanded Cooling @ 706 CFM

CFM	OD DB (°F)	ID WB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
706	50°F (10°C)	TC	17253	17276	17295	17296	17319	18293	18314	18333	18336	18358	19386	19411	19433	19436	19458	20554	20576	20598	20602	20627
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	0.79	0.79	0.79	0.79	0.79	0.84	0.84	0.84	0.84	0.84	0.89	0.89	0.89	0.89	0.89	0.94	0.94	0.94	0.94	0.95
	59°F (15°C)	TC	17820	17844	17863	17864	17888	18893	18916	18935	18938	18961	20022	20048	20071	20074	20097	21229	21252	21275	21278	21305
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	0.84	0.84	0.85	0.85	0.85	0.89	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	1.00	1.01	1.01	1.01	1.01
	68°F (20°C)	TC	18386	18411	18431	18432	18456	19494	19517	19537	19540	19564	20659	20686	20709	20713	20736	21904	21927	21951	21955	21982
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	0.90	0.90	0.90	0.90	0.90	0.95	0.95	0.95	0.95	0.95	1.01	1.01	1.01	1.01	1.01	1.07	1.07	1.07	1.07	1.07
	77°F (25°C)	TC	18953	18978	18999	18999	19025	20095	20119	20139	20143	20166	21295	21323	21347	21351	21375	22579	22603	22628	22631	22659
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	0.95	0.95	0.95	0.95	0.95	1.01	1.01	1.01	1.01	1.01	1.07	1.07	1.07	1.07	1.07	1.13	1.13	1.13	1.13	1.13
	82°F (27.8°C)	TC	18979	19004	19025	19025	19051	20122	20146	20166	20170	20194	21324	21352	21376	21380	21404	22609	22634	22659	22662	22690
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	1.04	1.05	1.05	1.05	1.05	1.11	1.11	1.11	1.11	1.11	1.17	1.18	1.18	1.18	1.18	1.24	1.25	1.25	1.25	1.25
	86°F (30°C)	TC	18635	18660	18680	18681	18706	19758	19781	19801	19805	19828	20938	20965	20989	20993	21016	22200	22224	22248	22251	22279
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	1.21	1.21	1.21	1.21	1.21	1.28	1.28	1.28	1.28	1.28	1.35	1.36	1.36	1.36	1.36	1.44	1.44	1.44	1.44	1.44
	95°F (35°C)	TC	17861	17885	17904	17905	17929	18937	18960	18978	18982	19005	20069	20095	20117	20121	20143	21278	21301	21324	21327	21354
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	1.57	1.57	1.57	1.57	1.57	1.66	1.66	1.67	1.67	1.67	1.76	1.76	1.77	1.77	1.77	1.87	1.87	1.87	1.87	1.87
	104°F (40°C)	TC	15189	15210	15226	15227	15247	16105	16124	16140	16143	16162	17067	17089	17108	17111	17130	18095	18115	18135	18138	18160
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	1.44	1.44	1.44	1.44	1.44	1.52	1.52	1.53	1.53	1.53	1.61	1.62	1.62	1.62	1.62	1.71	1.71	1.71	1.71	1.72
110°F (43°C)	TC	13587	13605	13619	13620	13638	14405	14422	14437	14439	14457	15266	15286	15303	15306	15323	16186	16203	16221	16224	16244	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	1.36	1.36	1.36	1.36	1.36	1.44	1.44	1.44	1.44	1.44	1.52	1.53	1.53	1.53	1.53	1.62	1.62	1.62	1.62	1.62	
115°F (46°C)	TC	9960	9974	9985	9985	9998	10561	10573	10584	10586	10598	11192	11206	11219	11221	11233	11866	11879	11892	11894	11908	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	1.13	1.13	1.13	1.13	1.13	1.19	1.19	1.20	1.20	1.20	1.26	1.27	1.27	1.27	1.27	1.34	1.34	1.34	1.34	1.35	
122°F (50°C)	TC	5126	5133	5138	5138	5145	5435	5441	5446	5447	5454	5759	5767	5773	5774	5781	6106	6113	6119	6120	6128	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	0.82	0.82	0.82	0.82	0.82	0.87	0.87	0.87	0.87	0.87	0.92	0.92	0.92	0.92	0.92	0.97	0.98	0.98	0.98	0.98	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

18HHHP-HE-SYS-B Expanded Heating @ 706 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
706	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	8678	8504	8462	8428	8352	1.45	1.47	1.47	1.47	1.48
	-4°F	10935	10716	10663	10620	10524	1.54	1.55	1.56	1.56	1.56
	0°F	12554	12303	12241	12192	12083	1.59	1.60	1.60	1.61	1.61
	5°F	14578	14287	14215	14158	14031	1.65	1.66	1.67	1.67	1.68
	14°F	15861	15544	15466	15404	15265	1.67	1.69	1.69	1.70	1.70
	17°F	16288	15963	15883	15819	15677	1.68	1.70	1.70	1.70	1.71
	22°F	17684	17331	17244	17175	17020	1.72	1.73	1.74	1.74	1.75
	27°F	19080	18698	18605	18530	18364	1.76	1.77	1.77	1.78	1.78
	32°F	20476	20066	19966	19886	19707	1.79	1.81	1.81	1.81	1.82
	35°F	21313	20887	20782	20699	20513	1.81	1.83	1.83	1.84	1.84
	37°F	21700	21266	21160	21075	20885	1.80	1.81	1.81	1.82	1.82
	42°F	22666	22213	22102	22014	21816	1.75	1.76	1.77	1.77	1.78
	44.6°F	23053	22592	22479	22389	22188	1.73	1.75	1.75	1.75	1.76
	47°F	23633	23160	23045	22952	22746	1.70	1.72	1.72	1.73	1.73
	52°F	23261	22795	22681	22591	22387	1.53	1.54	1.54	1.55	1.55
	57°F	22888	22430	22318	22229	22029	1.35	1.36	1.36	1.37	1.37
59°F	22739	22284	22173	22084	21885	1.28	1.29	1.29	1.29	1.30	
62°F	22515	22065	21955	21867	21670	1.17	1.18	1.18	1.19	1.19	
64.4°F	22366	21919	21810	21722	21527	1.10	1.11	1.11	1.11	1.12	

24HHHP-HE-SYS-B Expanded Cooling @ 853 CFM

CFM	OD DB (°F)	ID WB ID DB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
853	50°F (10°C)	TC	23731	23763	23789	23790	23822	25161	25191	25216	25221	25251	26665	26699	26729	26734	26764	28271	28302	28333	28337	28372
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	1.15	1.15	1.15	1.15	1.16	1.22	1.22	1.22	1.22	1.22	1.29	1.29	1.30	1.30	1.30	1.37	1.37	1.37	1.37	1.38
	59°F (15°C)	TC	24647	24681	24707	24708	24742	26133	26164	26190	26195	26226	27694	27730	27761	27766	27797	29363	29395	29427	29431	29468
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	1.23	1.23	1.23	1.23	1.23	1.30	1.30	1.30	1.30	1.30	1.38	1.38	1.38	1.38	1.38	1.46	1.46	1.46	1.46	1.47
	68°F (20°C)	TC	25564	25598	25626	25627	25661	27104	27136	27163	27168	27201	28724	28761	28793	28798	28830	30454	30487	30520	30525	30563
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	1.30	1.30	1.30	1.30	1.31	1.38	1.38	1.38	1.38	1.38	1.46	1.46	1.47	1.47	1.47	1.55	1.55	1.55	1.55	1.56
	77°F (25°C)	TC	26480	26515	26544	26545	26581	28076	28109	28137	28142	28176	29753	29792	29825	29830	29864	31546	31580	31614	31619	31659
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	1.38	1.38	1.38	1.38	1.38	1.46	1.46	1.46	1.46	1.46	1.55	1.55	1.55	1.55	1.55	1.64	1.64	1.64	1.64	1.65
	82°F (27.8°C)	TC	26570	26606	26634	26635	26671	28171	28204	28232	28238	28271	29854	29893	29926	29932	29965	31653	31687	31722	31727	31766
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	1.53	1.53	1.54	1.54	1.54	1.62	1.63	1.63	1.63	1.63	1.72	1.72	1.73	1.73	1.73	1.83	1.83	1.83	1.83	1.83
	86°F (30°C)	TC	26113	26148	26177	26178	26213	27687	27720	27747	27753	27786	29341	29379	29412	29417	29450	31109	31143	31177	31182	31220
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	1.80	1.80	1.81	1.81	1.81	1.91	1.91	1.91	1.91	1.92	2.02	2.03	2.03	2.03	2.03	2.15	2.15	2.15	2.15	2.15
	95°F (35°C)	TC	25086	25120	25147	25148	25182	26598	26629	26655	26661	26692	28187	28223	28255	28260	28292	29885	29917	29950	29955	29992
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	2.41	2.41	2.41	2.41	2.41	2.55	2.55	2.56	2.56	2.56	2.70	2.71	2.71	2.71	2.71	2.87	2.87	2.87	2.87	2.88
	104°F (40°C)	TC	21329	21358	21381	21382	21411	22615	22642	22664	22669	22695	23966	23997	24024	24028	24055	25410	25438	25465	25469	25501
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	2.29	2.29	2.30	2.30	2.30	2.43	2.43	2.43	2.44	2.44	2.57	2.58	2.58	2.58	2.58	2.73	2.73	2.74	2.74	2.74
110°F (43°C)	TC	19076	19101	19122	19123	19149	20225	20249	20269	20273	20297	21434	21461	21485	21489	21513	22725	22750	22774	22778	22806	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	2.22	2.23	2.23	2.23	2.23	2.36	2.36	2.36	2.36	2.37	2.50	2.50	2.50	2.50	2.51	2.65	2.65	2.65	2.65	2.66	
115°F (46°C)	TC	16862	16885	16903	16904	16927	17878	17899	17917	17921	17942	18946	18971	18992	18996	19017	20088	20110	20132	20135	20160	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	2.03	2.03	2.03	2.03	2.03	2.15	2.15	2.15	2.15	2.16	2.28	2.28	2.28	2.28	2.29	2.42	2.42	2.42	2.42	2.42	
122°F (50°C)	TC	13911	13929	13944	13945	13964	14749	14766	14781	14784	14802	15630	15650	15668	15671	15688	16572	16590	16608	16611	16631	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	1.77	1.77	1.77	1.77	1.77	1.87	1.87	1.88	1.88	1.88	1.98	1.99	1.99	1.99	1.99	2.10	2.11	2.11	2.11	2.11	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

24HHHP-HE-SYS-B Expanded Heating @ 853 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
853	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	12684	12431	12369	12319	12208	2.10	2.11	2.12	2.12	2.13
	-4°F	15484	15174	15098	15038	14902	2.22	2.24	2.25	2.25	2.26
	0°F	17269	16923	16839	16771	16621	2.27	2.29	2.29	2.30	2.31
	5°F	19500	19110	19015	18939	18768	2.33	2.35	2.36	2.36	2.37
	14°F	21445	21016	20911	20828	20640	2.42	2.43	2.44	2.44	2.45
	17°F	22093	21652	21543	21457	21264	2.44	2.46	2.47	2.47	2.48
	22°F	23492	23022	22907	22816	22610	2.55	2.57	2.58	2.58	2.59
	27°F	24891	24393	24271	24174	23956	2.66	2.69	2.69	2.70	2.71
	32°F	26290	25764	25635	25532	25303	2.77	2.80	2.80	2.81	2.82
	35°F	27129	26586	26453	26347	26110	2.84	2.86	2.87	2.87	2.89
	37°F	28598	28026	27886	27775	27525	2.86	2.89	2.89	2.90	2.91
	42°F	32272	31627	31469	31343	31061	2.92	2.94	2.95	2.95	2.97
	44.6°F	33742	33067	32902	32770	32475	2.94	2.96	2.97	2.98	2.99
	47°F	35947	35228	35051	34911	34597	2.97	3.00	3.00	3.01	3.02
	52°F	36540	35810	35631	35488	35169	2.79	2.81	2.82	2.83	2.84
	57°F	37134	36392	36210	36065	35740	2.61	2.63	2.64	2.64	2.65
	59°F	37372	36624	36441	36295	35969	2.54	2.56	2.56	2.57	2.58
62°F	37728	36973	36789	36641	36312	2.43	2.45	2.45	2.46	2.47	
64.4°F	37966	37206	37020	36872	36540	2.35	2.37	2.38	2.38	2.39	

36HHHP-HE-SYS-B Expanded Cooling @ 1,235 CFM

CFM	OD DB (°F)	ID WB ID DB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
1235	50°F (10°C)	TC	39404	39457	39499	39501	39554	41778	41828	41869	41877	41927	44274	44332	44381	44389	44439	46942	46993	47044	47051	47110
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	2.45	2.46	2.46	2.46	2.46	2.60	2.60	2.61	2.61	2.61	2.76	2.76	2.76	2.76	2.77	2.92	2.92	2.93	2.93	2.93
	59°F (15°C)	TC	40670	40725	40769	40771	40826	43121	43172	43215	43224	43275	45698	45757	45808	45816	45868	48451	48504	48556	48564	48624
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	2.56	2.56	2.56	2.56	2.57	2.71	2.71	2.72	2.72	2.72	2.87	2.88	2.88	2.88	2.88	3.05	3.05	3.05	3.05	3.06
	68°F (20°C)	TC	41937	41993	42039	42041	42097	44464	44517	44561	44570	44623	47121	47182	47235	47243	47296	49960	50014	50069	50077	50139
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	2.66	2.66	2.67	2.67	2.67	2.82	2.82	2.83	2.83	2.83	2.99	2.99	3.00	3.00	3.00	3.17	3.17	3.18	3.18	3.18
	77°F (25°C)	TC	43204	43262	43308	43310	43369	45807	45862	45907	45916	45971	48544	48607	48661	48670	48725	51469	51525	51581	51589	51653
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	2.76	2.77	2.77	2.77	2.78	2.93	2.93	2.94	2.94	2.94	3.11	3.11	3.11	3.11	3.12	3.29	3.30	3.30	3.30	3.31
	82°F (27.8°C)	TC	42852	42910	42956	42958	43016	45434	45488	45533	45542	45596	48149	48211	48265	48274	48328	51050	51106	51161	51169	51233
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	2.93	2.93	2.93	2.93	2.94	3.10	3.11	3.11	3.11	3.11	3.29	3.29	3.30	3.30	3.30	3.49	3.49	3.49	3.49	3.50
	86°F (30°C)	TC	41239	41294	41339	41341	41396	43724	43776	43819	43828	43880	46336	46396	46448	46457	46509	49128	49182	49235	49243	49304
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	3.19	3.19	3.20	3.20	3.20	3.38	3.38	3.39	3.39	3.39	3.58	3.59	3.59	3.59	3.60	3.80	3.80	3.81	3.81	3.81
	95°F (35°C)	TC	37609	37660	37700	37702	37753	39876	39923	39962	39970	40018	42258	42313	42360	42368	42415	44804	44853	44902	44909	44964
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	3.78	3.78	3.78	3.78	3.79	4.00	4.01	4.01	4.01	4.02	4.24	4.25	4.25	4.25	4.26	4.50	4.50	4.51	4.51	4.51
	104°F (40°C)	TC	31531	31574	31608	31609	31652	33432	33471	33504	33511	33551	35429	35475	35515	35521	35561	37564	37605	37646	37651	37698
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	3.37	3.37	3.37	3.37	3.38	3.57	3.57	3.58	3.58	3.58	3.78	3.79	3.79	3.79	3.80	4.01	4.01	4.02	4.02	4.02
110°F (43°C)	TC	27885	27922	27953	27954	27991	29565	29600	29630	29636	29671	31332	31372	31407	31413	31448	33220	33256	33292	33297	33339	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	3.12	3.12	3.13	3.13	3.13	3.31	3.31	3.32	3.32	3.32	3.51	3.51	3.52	3.52	3.52	3.72	3.72	3.73	3.73	3.73	
115°F (46°C)	TC	22267	22297	22321	22322	22352	23609	23637	23661	23665	23693	25020	25052	25080	25085	25113	26527	26556	26585	26589	26622	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	2.71	2.72	2.72	2.72	2.72	2.88	2.88	2.88	2.88	2.89	3.05	3.05	3.06	3.06	3.06	3.23	3.24	3.24	3.24	3.24	
122°F (50°C)	TC	14777	14797	14813	14814	14834	15668	15686	15702	15705	15723	16604	16625	16644	16647	16665	17604	17623	17642	17645	17667	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	2.17	2.17	2.18	2.18	2.18	2.30	2.30	2.31	2.31	2.31	2.44	2.44	2.45	2.45	2.45	2.59	2.59	2.59	2.59	2.60	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

36HHHP-HE-SYS-B Expanded Heating @ 1,235 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
1235	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	17874	17516	17428	17359	17203	3.18	3.20	3.21	3.21	3.23
	-4°F	21968	21528	21421	21335	21143	3.33	3.35	3.36	3.37	3.38
	0°F	24269	23784	23665	23570	23358	3.40	3.43	3.44	3.44	3.46
	5°F	27146	26603	26470	26364	26127	3.50	3.53	3.53	3.54	3.55
	14°F	30597	29985	29835	29716	29449	3.70	3.73	3.74	3.74	3.76
	17°F	31748	31113	30957	30833	30556	3.77	3.80	3.80	3.81	3.83
	22°F	33402	32734	32570	32440	32148	3.72	3.75	3.75	3.76	3.78
	27°F	35056	34355	34183	34047	33740	3.67	3.70	3.70	3.71	3.73
	32°F	36711	35976	35796	35653	35332	3.62	3.65	3.65	3.66	3.68
	35°F	37703	36949	36764	36617	36288	3.59	3.62	3.63	3.63	3.65
	37°F	38826	38050	37860	37708	37369	3.54	3.57	3.58	3.59	3.60
	42°F	41634	40802	40598	40435	40071	3.44	3.46	3.47	3.48	3.49
	44.6°F	42758	41902	41693	41526	41152	3.39	3.42	3.43	3.43	3.45
	47°F	44442	43554	43336	43162	42774	3.33	3.35	3.36	3.37	3.38
	52°F	45935	45016	44791	44612	44210	3.15	3.18	3.18	3.19	3.20
	57°F	47427	46478	46246	46061	45647	2.98	3.00	3.01	3.02	3.03
	59°F	48024	47063	46828	46641	46221	2.91	2.93	2.94	2.94	2.96
62°F	48919	47941	47701	47510	47083	2.81	2.83	2.83	2.84	2.85	
64.4°F	49516	48526	48283	48090	47657	2.74	2.76	2.76	2.77	2.78	

48HHHP-HE-SYS-B Expanded Cooling @ 1,647 CFM

CFM	OD DB (°F)	ID WB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
1647	50°F (10°C)	TC	52533	52604	52660	52663	52734	55699	55765	55820	55831	55897	59027	59103	59169	59180	59246	62583	62651	62719	62729	62807
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	2.73	2.73	2.74	2.74	2.74	2.89	2.90	2.90	2.90	2.90	3.07	3.07	3.07	3.07	3.08	3.25	3.25	3.26	3.26	3.26
	59°F (15°C)	TC	53246	53318	53375	53378	53450	56455	56522	56578	56589	56656	59828	59906	59973	59984	60051	63433	63502	63571	63581	63660
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	3.01	3.02	3.02	3.02	3.02	3.19	3.20	3.20	3.20	3.20	3.38	3.39	3.39	3.39	3.40	3.59	3.59	3.60	3.60	3.60
	68°F (20°C)	TC	53960	54032	54091	54093	54166	57212	57279	57336	57347	57415	60630	60708	60776	60787	60855	64283	64353	64423	64433	64513
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	3.29	3.30	3.30	3.30	3.31	3.49	3.50	3.50	3.50	3.51	3.70	3.71	3.71	3.71	3.72	3.92	3.93	3.93	3.93	3.94
	77°F (25°C)	TC	54673	54747	54806	54808	54882	57968	58037	58094	58105	58174	61431	61511	61580	61591	61660	65133	65203	65274	65284	65366
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	3.58	3.58	3.59	3.59	3.59	3.79	3.80	3.80	3.80	3.81	4.02	4.02	4.03	4.03	4.03	4.26	4.27	4.27	4.27	4.28
	82°F (27.8°C)	TC	54278	54351	54410	54412	54486	57549	57618	57675	57686	57754	60988	61067	61135	61146	61215	64662	64733	64803	64813	64894
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	3.87	3.88	3.88	3.88	3.89	4.10	4.11	4.11	4.11	4.12	4.35	4.35	4.36	4.36	4.36	4.61	4.62	4.62	4.62	4.63
	86°F (30°C)	TC	52964	53036	53093	53095	53167	56156	56223	56278	56289	56356	59511	59589	59655	59666	59733	63097	63166	63234	63244	63323
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	4.28	4.28	4.29	4.29	4.29	4.54	4.54	4.54	4.55	4.55	4.81	4.81	4.82	4.82	4.82	5.10	5.10	5.11	5.11	5.11
	95°F (35°C)	TC	50008	50075	50129	50132	50199	53022	53085	53137	53148	53211	56190	56263	56325	56336	56399	59575	59640	59705	59714	59788
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	5.19	5.20	5.21	5.21	5.21	5.51	5.51	5.52	5.52	5.53	5.83	5.84	5.85	5.85	5.86	6.19	6.19	6.20	6.20	6.21
	104°F (40°C)	TC	42592	42649	42695	42697	42755	45159	45212	45257	45266	45320	47857	47919	47972	47981	48035	50740	50795	50851	50859	50922
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	4.88	4.88	4.89	4.89	4.90	5.17	5.18	5.18	5.18	5.19	5.48	5.49	5.49	5.49	5.50	5.81	5.82	5.82	5.82	5.83
	110°F (43°C)	TC	38142	38194	38235	38236	38288	40441	40489	40529	40537	40585	42857	42913	42960	42968	43016	45439	45489	45538	45545	45602
		S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00
		PI	4.69	4.69	4.70	4.70	4.70	4.97	4.98	4.98	4.98	4.99	5.27	5.27	5.28	5.28	5.29	5.58	5.59	5.60	5.60	5.60
	115°F (46°C)	TC	30307	30348	30381	30382	30423	32134	32172	32203	32210	32248	34053	34098	34136	34142	34180	36105	36144	36184	36189	36234
		S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00
		PI	3.90	3.90	3.91	3.91	3.91	4.13	4.14	4.14	4.14	4.15	4.38	4.38	4.39	4.39	4.40	4.64	4.65	4.65	4.65	4.66
	122°F (50°C)	TC	19860	19887	19908	19909	19936	21057	21082	21103	21107	21132	22315	22344	22369	22373	22398	23660	23685	23711	23715	23744
		S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00
		PI	2.84	2.85	2.85	2.85	2.85	3.02	3.02	3.02	3.02	3.03	3.20	3.20	3.20	3.20	3.21	3.39	3.39	3.40	3.40	3.40

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

48HHHP-HE-SYS-B Expanded Heating @ 1,647 CFM

CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
1647	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	28465	27896	27757	27646	27397	4.71	4.75	4.76	4.77	4.79
	-4°F	33728	33054	32888	32757	32462	4.99	5.03	5.04	5.05	5.07
	0°F	36677	35943	35763	35620	35300	5.15	5.20	5.21	5.22	5.24
	5°F	40362	39555	39357	39200	38847	5.36	5.40	5.41	5.42	5.45
	14°F	45748	44833	44608	44430	44030	5.64	5.68	5.69	5.70	5.73
	17°F	47543	46592	46359	46173	45758	5.73	5.77	5.79	5.80	5.82
	22°F	50437	49428	49181	48985	48544	5.76	5.81	5.82	5.83	5.85
	27°F	53332	52265	52004	51796	51330	5.79	5.84	5.85	5.86	5.89
	32°F	56226	55102	54826	54607	54116	5.83	5.87	5.88	5.90	5.92
	35°F	57963	56804	56520	56294	55787	5.84	5.89	5.90	5.92	5.94
	37°F	58616	57443	57156	56927	56415	5.71	5.76	5.77	5.78	5.81
	42°F	60247	59042	58747	58512	57985	5.38	5.43	5.44	5.45	5.47
	44.6°F	60900	59682	59383	59146	58613	5.25	5.29	5.30	5.31	5.34
	47°F	61879	60641	60338	60096	59556	5.05	5.09	5.10	5.11	5.13
	52°F	61038	59817	59518	59280	58746	4.61	4.65	4.66	4.67	4.68
	57°F	60197	58993	58698	58463	57937	4.17	4.20	4.21	4.22	4.23
	59°F	59861	58663	58370	58137	57613	3.99	4.02	4.03	4.04	4.05
62°F	59356	58169	57878	57647	57128	3.72	3.75	3.76	3.77	3.78	
64.4°F	59020	57839	57550	57320	56804	3.55	3.58	3.58	3.59	3.60	

60HHHP-HE-SYS-B Expanded Cooling @ 2,000 CFM

CFM	OD DB (°F)	ID WB	60.8°F (16.0°C)					64.4°F (18.0°C)					67°F (19.4°C)					71.6°F (22.0°C)				
			73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F	73.4°F	77.0°F	80.0°F	80.6°F	84.2°F
			23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C	23.0°C	25.0°C	26.7°C	27.0°C	29.0°C
2000	50°F (10°C)	TC	56661	56737	56798	56801	56877	60075	60147	60206	60218	60289	63665	63747	63818	63830	63901	67501	67574	67647	67658	67742
		S/T	0.50	0.58	0.66	0.66	0.76	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90
		PI	2.77	2.77	2.78	2.78	2.78	2.94	2.94	2.94	2.94	2.95	3.11	3.12	3.12	3.12	3.12	3.30	3.30	3.31	3.31	3.31
	59°F (15°C)	TC	57516	57593	57655	57658	57736	60982	61054	61115	61127	61199	64626	64709	64782	64794	64866	68519	68594	68669	68679	68765
		S/T	0.50	0.59	0.67	0.67	0.76	0.53	0.62	0.71	0.71	0.81	0.56	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91
		PI	3.05	3.05	3.05	3.05	3.06	3.23	3.23	3.24	3.24	3.24	3.42	3.43	3.43	3.43	3.44	3.63	3.63	3.64	3.64	3.64
	68°F (20°C)	TC	58371	58450	58513	58515	58594	61889	61962	62023	62036	62109	65586	65672	65745	65757	65830	69538	69614	69690	69700	69787
		S/T	0.51	0.60	0.69	0.69	0.78	0.54	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.61	0.72	0.82	0.82	0.93
		PI	3.32	3.33	3.33	3.33	3.34	3.52	3.53	3.53	3.53	3.54	3.73	3.74	3.74	3.74	3.75	3.96	3.96	3.97	3.97	3.97
	77°F (25°C)	TC	59226	59306	59370	59373	59453	62796	62870	62932	62945	63019	66547	66634	66708	66720	66795	70557	70634	70711	70722	70810
		S/T	0.52	0.61	0.69	0.69	0.79	0.55	0.65	0.74	0.74	0.84	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.94
		PI	3.60	3.61	3.61	3.61	3.61	3.82	3.82	3.83	3.83	3.83	4.05	4.05	4.06	4.06	4.06	4.29	4.29	4.30	4.30	4.30
	82°F (27.8°C)	TC	59031	59110	59174	59177	59256	62588	62663	62724	62737	62811	66328	66414	66488	66500	66575	70324	70401	70477	70488	70576
		S/T	0.53	0.62	0.70	0.70	0.80	0.56	0.66	0.75	0.75	0.85	0.59	0.70	0.79	0.79	0.90	0.63	0.74	0.84	0.84	0.95
		PI	4.00	4.00	4.01	4.01	4.01	4.24	4.24	4.25	4.25	4.25	4.49	4.50	4.50	4.50	4.51	4.76	4.77	4.77	4.77	4.78
	86°F (30°C)	TC	58028	58107	58169	58172	58250	61526	61598	61659	61671	61745	65201	65286	65359	65371	65444	69130	69205	69280	69291	69377
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	4.62	4.62	4.63	4.63	4.63	4.90	4.90	4.91	4.91	4.91	5.19	5.19	5.20	5.20	5.21	5.50	5.51	5.51	5.51	5.52
	95°F (35°C)	TC	55773	55848	55908	55911	55986	59134	59204	59263	59274	59345	62667	62748	62818	62830	62900	66443	66515	66587	66598	66681
		S/T	0.53	0.63	0.71	0.71	0.81	0.57	0.66	0.75	0.75	0.86	0.60	0.70	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97
		PI	6.02	6.02	6.03	6.03	6.04	6.38	6.39	6.39	6.39	6.40	6.76	6.77	6.78	6.78	6.78	7.17	7.17	7.18	7.18	7.19
	104°F (40°C)	TC	48440	48505	48557	48560	48625	51359	51420	51471	51481	51542	54428	54498	54559	54569	54630	57707	57770	57833	57842	57914
		S/T	0.55	0.64	0.73	0.73	0.83	0.58	0.68	0.77	0.77	0.88	0.62	0.72	0.82	0.82	0.93	0.65	0.76	0.87	0.87	0.99
		PI	5.35	5.36	5.36	5.36	5.37	5.67	5.68	5.68	5.69	5.69	6.01	6.02	6.03	6.03	6.03	6.37	6.38	6.39	6.39	6.40
110°F (43°C)	TC	44040	44100	44147	44149	44209	46694	46750	46796	46805	46861	49484	49548	49604	49613	49668	52466	52523	52580	52588	52654	
	S/T	0.57	0.67	0.76	0.76	0.86	0.60	0.71	0.80	0.80	0.91	0.64	0.75	0.85	0.85	0.97	0.68	0.79	0.90	0.90	1.00	
	PI	4.95	4.96	4.96	4.96	4.97	5.25	5.25	5.26	5.26	5.27	5.56	5.57	5.58	5.58	5.58	5.90	5.90	5.91	5.91	5.92	
115°F (46°C)	TC	33767	33812	33849	33850	33896	35802	35844	35880	35887	35929	37941	37990	38033	38040	38082	40227	40271	40315	40321	40371	
	S/T	0.57	0.67	0.77	0.77	0.87	0.61	0.71	0.81	0.81	0.92	0.65	0.76	0.86	0.86	0.98	0.68	0.80	0.91	0.91	1.00	
	PI	4.04	4.04	4.05	4.05	4.05	4.28	4.28	4.29	4.29	4.29	4.54	4.54	4.55	4.55	4.55	4.81	4.81	4.82	4.82	4.83	
122°F (50°C)	TC	20069	20096	20118	20119	20146	21279	21304	21325	21329	21355	22550	22579	22605	22609	22634	23909	23935	23961	23964	23994	
	S/T	0.59	0.69	0.78	0.78	0.89	0.62	0.73	0.83	0.83	0.95	0.66	0.77	0.88	0.88	1.00	0.70	0.82	0.93	0.93	1.00	
	PI	2.82	2.82	2.82	2.82	2.83	2.99	2.99	2.99	2.99	3.00	3.17	3.17	3.17	3.17	3.18	3.36	3.36	3.36	3.36	3.37	

TC:Total Cooling Capacity (BTU/hr)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

60HHP-HE-SYS-B Expanded Heating @ 2,000 CFM

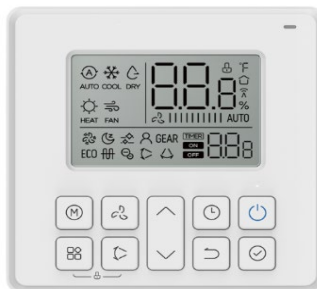
CFM	HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE										
	OD DB (°F)	TC : Total Heating Capacity(BTU/hr)					PI : Power Input(kW)				
		Indoor Conditions (DB °F)					Indoor Conditions (DB °F)				
		60.8°F	68°F	70°F	71.6°F	75.2°F	60.8°F	68°F	70°F	71.6°F	75.2°F
2000	-22°F	/	/	/	/	/	/	/	/	/	/
	-13°F	24847	24350	24229	24132	23915	4.32	4.35	4.36	4.37	4.39
	-4°F	32682	32028	31868	31741	31455	5.02	5.06	5.07	5.08	5.10
	0°F	36388	35660	35482	35340	35022	5.12	5.16	5.17	5.18	5.20
	5°F	41020	40200	39999	39839	39480	5.24	5.28	5.29	5.30	5.33
	14°F	41889	41051	40846	40683	40316	4.99	5.03	5.04	5.05	5.07
	17°F	42178	41335	41128	40964	40595	4.91	4.95	4.96	4.97	4.99
	22°F	44990	44091	43870	43695	43301	5.06	5.11	5.12	5.13	5.15
	27°F	47802	46846	46612	46426	46008	5.22	5.26	5.27	5.29	5.31
	32°F	50614	49602	49354	49157	48714	5.38	5.42	5.43	5.44	5.47
	35°F	52301	51255	50999	50795	50338	5.47	5.52	5.53	5.54	5.56
	37°F	54972	53872	53603	53389	52908	5.41	5.46	5.47	5.48	5.50
	42°F	61648	60415	60113	59872	59334	5.27	5.31	5.32	5.33	5.35
	44.6°F	64318	63032	62717	62466	61904	5.21	5.25	5.26	5.27	5.29
	47°F	68324	66957	66623	66356	65759	5.12	5.16	5.17	5.18	5.20
	52°F	66506	65176	64850	64591	64010	4.59	4.63	4.64	4.65	4.67
	57°F	64689	63395	63078	62826	62260	4.07	4.10	4.11	4.12	4.13
	59°F	63962	62683	62369	62120	61561	3.86	3.89	3.90	3.90	3.92
62°F	62872	61614	61306	61061	60511	3.54	3.57	3.58	3.58	3.60	
64.4°F	62145	60902	60597	60355	59812	3.33	3.36	3.36	3.37	3.38	

Control Options

Part Number	Description
MWRC	Wireless infrared remote controller with timer, sleep function, follow me and turbo function.
SWC120LR	Standard wired wall controller with operation mode control, timer and follow me functions.
WIFI-DWC120X2	Deluxe wired wall controller with WFI and app, with programmable weekly timer, auto-restart, child lock, Turbo function, follow me function and more. The WIFI-DWC120X2 also functions as a receiver for the MWRC remote controller.
DWC120X2	Deluxe wired wall controller with programmable weekly timer, auto-restart, child lock, and follow me functions. The DWC120X2 also functions as a receiver for the MWRC remote controller.
M24V-INT	24V Interface Kit that allows the use of a conventional 24V thermostat with an HCHP system.



MWRC
Wireless Remote



SWC120LR
Standard Wired
Wall Controller



WIFI-DWC120X2
Deluxe Wired Wall



DWC120X2
Deluxe Wired Wall



M24V-INT 24V
Interface Kit

Solid Ceiling Access Panels

Standard Features

Design

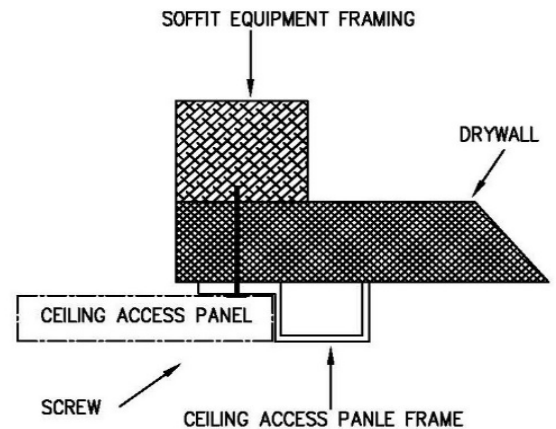
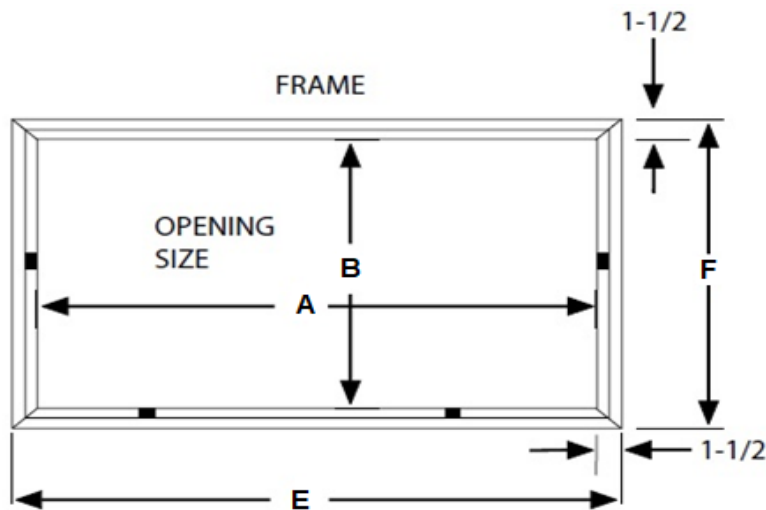
- Interior Panel Braces
- Integrated Clips in Panel Frame
- Single Piece Wrapped Frame with 90° Squared Corner Seams
- Captive Screw Retainers

Materials

- Heavy Gauge Galvanized Steel Construction with Off-White Powder Paint Finish
- Stainless Steel Screws with Protective Washers

Packaging

- Individually Wrapped and Individually Boxed
- Interior Glossy Label with Panel Model Number and Barcode



PANEL MODEL NUMBER	INSIDE FRAME		OUTSIDE FRAME		FAN COIL MODELS
	A	B	E	F	
CAP4633-S	46	33	49	36	9HHHP0-C-M-B, 12HHHP0-C-M-B
CAP5833-S	58	33	61	36	18HHHP0-C-M-B
CAP5833-S	58	33	61	36	24HHHP0-C-M-B
CAP6634-S	66	34	69	37	36HHHP0-C-M-B
CAP6634-S	66	34	69	37	48HHHP0-C-M-B
CAP7435-S	74	35	77	38	60HHHP0-C-M-B





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