ENGINEERED PRODUCTS

Model - MS(50-80) (A, B)† D

Unit Type (UT) - MS, Separated Combustion Indoor Unit
Capacity (CA) - (50-80) (500-800 mBTU)
Furnace Type (FT) - A, B Standard Temperature Rise (30-80)F°
Indoor Arrangement (IA) - D, Standard Blower Unit with Evaporative Cooler

Performance Table

						TOTAL STATIC PRESSURE (INCHES OF WATER)											
	TR		Input BTU/Hr.		Max. Output	0.4		0.8		1		1.4		1.8		2	
Capacity	(F°)	CFM	Max.	Min.	BTU/Hr.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	160	2,300				735	.58	895	.80	970	.91	1110	1.17	1235	1.44	1295	1.58
	147	2,500				765	.70	920	.93	990	1.06	1125	1.32	1250	1.60	1305	1.75
	123	3,000				855	1.08	995	1.36	1055	1.50	1175	1.79	1290	2.10	1345	2.26
50	105	3,500	500,000	200,000	400,000	950	1.59	1075	1.92	1130	2.08	1240	2.41	1345	2.75	1395	2.92
	92	4,000				1050	2.26	1165	2.63	1215	2.81	1315	3.18	1410	3.56	1455	3.75
	82	4,500				1155	3.11	1255	3.52	1305	3.72	1395	4.14	1485	4.55	1530	4.76
	74	5,000				1260	4.15	1350	4.60	1395	4.83						
	71	5,200				1300	4.62										
	164	2,700				800	.67	1010	1.05	1105	1.25	1275	1.69	1425	2.16	1495	2.40
	147	3,000				840	.83	1035	1.22	1130	1.45	1295	1.92	1445	2.41	1510	2.67
60	111	4,000	600,000	240,000	480,000	1000	1.59	1150	2.06	1225	2.31	1370	2.86	1510	3.44	1575	3.75
	88	5,000				1170	2.76	1300	3.35	1360	3.64	1480	4.24	1600	4.89		
	74	6,000				1350	4.44										
	161	3,200				690	.64	875	1.01	960	1.22	1110	1.68	1250	2.19	1315	2.46
	129	4,000				765	1.02	930	1.44	1010	1.67	1145	2.16	1270	2.70	1330	2.99
70	103	5,000	700,000	280,000	560,000	870	1.70	1010	2.20	1080	2.46	1210	3.01	1325	3.60	1380	3.91
	86	6,000				985	2.68	1110	3.25	1170	3.55	1280	4.16	1390	4.82		
	74	7,000				1105	4.00	1215	4.66	1270	4.99						
	69	7,500				1165	4.81										
	159	3,700				705	.80	885	1.20	965	1.41	1105	1.88	1240	2.40	1300	2.68
	147	4,000				730	.95	900	1.36	980	1.58	1120	2.07	1245	2.60	1305	2.88
80	118	5,000	800,000	320,000	640,000	825	1.57	975	2.05	1040	2.31	1175	2.85	1295	3.43	1350	3.73
	98	6,000				930	2.46	1060	3.02	1120	3.31	1235	3.91	1350	4.55	1400	4.88
	84	7,000				1040	3.66	1160	4.30	1210	4.63						
	79	7,500				1100	4.39										

NOTES: The pressure drop for Accessories (from the following table) must be allowed for when using the above Performance table.
Unless otherwise specified, the following conversions may be used for calculating SI units:
1 Cu. Ft. = 0.028m^3 , 1 ft. = 0.305m, 1 in. = 25.4mm, 1 psig = 6.894 kPa, 1000 Btu per hr. = 0.293 kW,
1 in. water column = 0.249 kPa, 1 gallon = 3.785 L, 1000 Btu/Cu. Ft. = 37.5 MJ/m^3, 1 lb. = 0.453 kg.

Project: _____

Unit Tag: _____

The above dimensional drawing includes options that might not pertain to the unit being submitted for approval. Please note that the following items checked below are **not included** with the unit being submitted:

☐ Outside Air Opening / Dampers

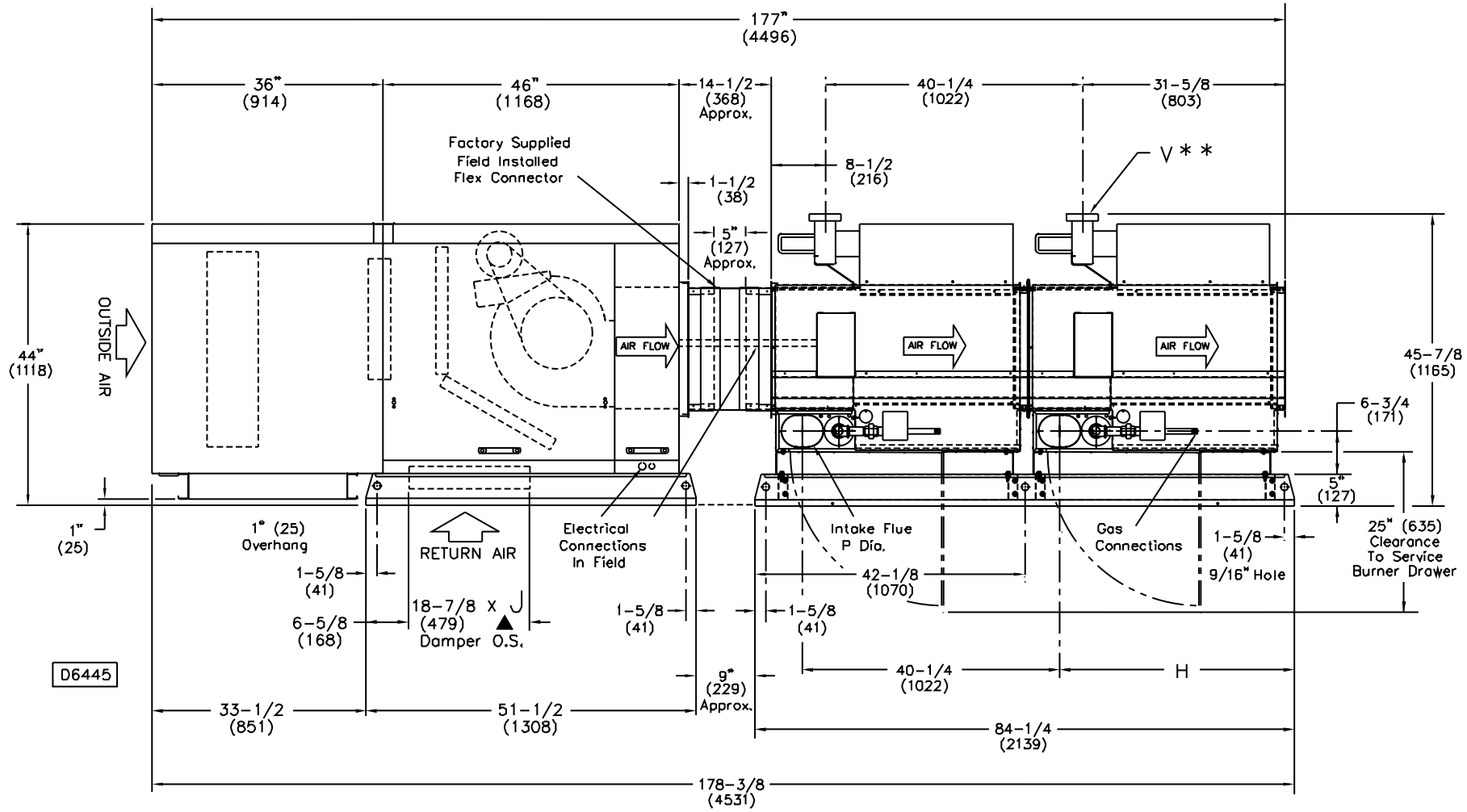
☐ Return Air Openings / Dampers

STERLING® HVAC PRODUCTS
260 NORTH ELM ST. WESTFIELD, MA 01085
(413) 564-5540 • FAX: (413) 562-5311
www.sterlinghvac.com A MESTEK COMPANY

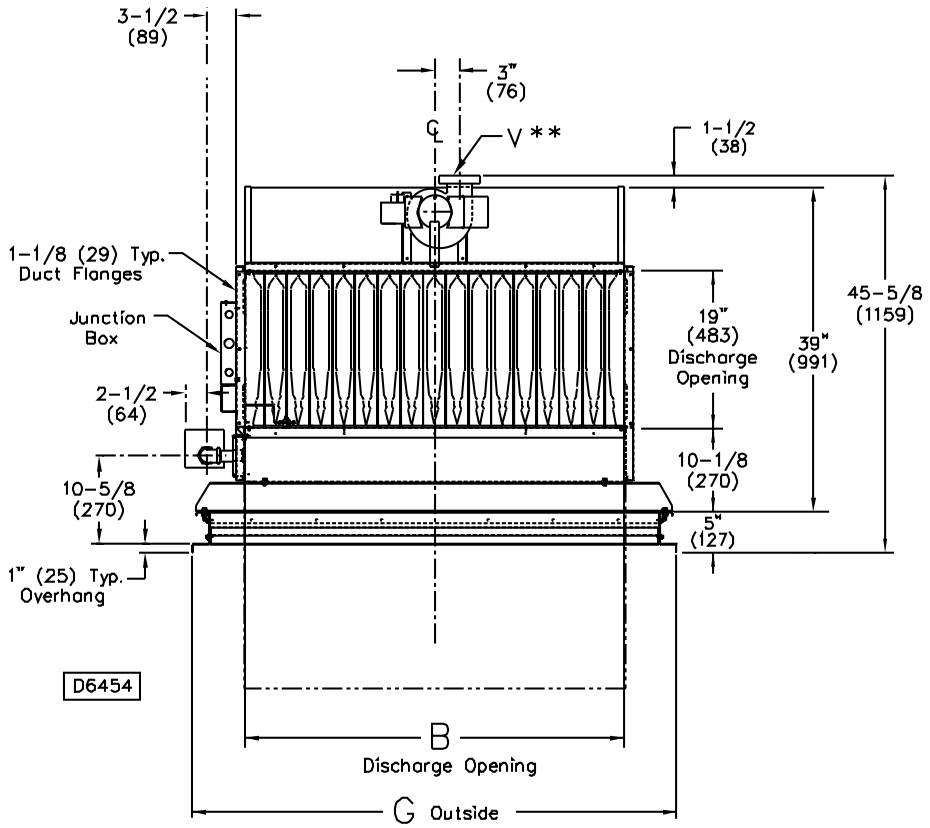
ENGINEERED PRODUCTS

Model - MS(50-80) (A, B)† D

Unit Type (UT) - MS, Separated Combustion Indoor Unit
Capacity (CA) - (50-80) (500-800 mBTU)
Furnace Type (FT) - A, B Standard Temperature Rise (30-80)F°
Indoor Arrangement (IA) - D, Standard Blower Unit with Evaporative Cooler



Discharge End View



Capacity	A	B	C	D	G	H	J▲	L	U	P*	V Dia.**	GAS INLET NAT	GAS INLET LP
☐ 50	43- 7/8 (114)	29- 5/16 (745)	21- 15/16 (557)	24- 7/8 (632)	42- 1/16 (1068)	37- 7/16 (678)	35 (889)	N/A	N/A	5 RD (127)	5 (127)	3/4	1/2 OR 3/4
☐ 60	54- 7/8 (1394)	34- 13/16 (884)	27- 7/16 (697)	30- 3/8 (772)	53- 1/16 (1348)	36- 11/16 (640)	46 (1168)	N/A	N/A	6 OV (152)	6 (152)	3/4	1/2 OR 3/4
☐ 70	54- 7/8 (1394)	40-5/16 (1024)	27- 7/16 (697)	30- 3/8 (772)	53- 1/16 (1348)	36- 11/16 (640)	46 (1168)	N/A	N/A	6 OV (152)	6 (152)	3/4	1/2 OR 3/4
☐ 80	60- 3/8 (1534)	45- 13/16 (1164)	30- 3/16 (767)	33- 1/8 (841)	58- 9/16 (1487)	36- 11/16 (932)	51- 1/2 (1308)	181-1/4 (4604)	177 (4495)	6 OV (152)	6 (152)	3/4	1/2 OR 3/4

NOTE:

See page 4 for intake end view.

Dimensions are in inches, dimensions in parenthesis are in millimeters. ▲"J" dimension is an outside dimension for air dampers.

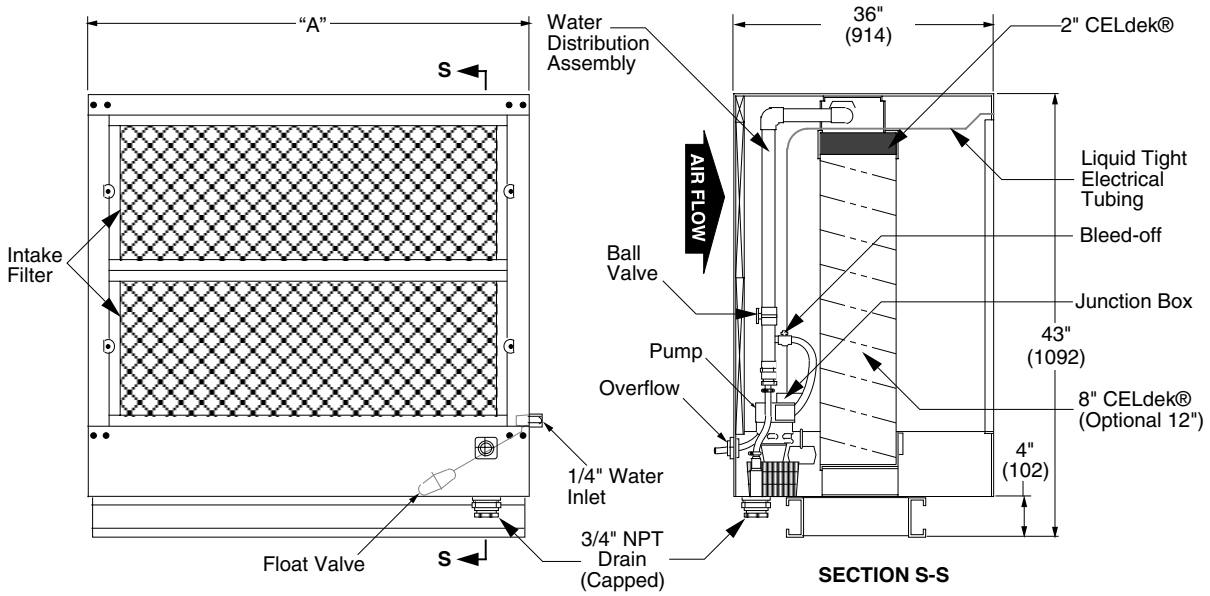
*RD = Round *OV = Oval

** The 5" to 6" flue adapter is supplied by the manufacturer.

STERLING HVAC PRODUCTS

MS(50-80) (A, B)† D
Evaporative Cooler Specifications

MODEL	A
50	43-7/8" (1114)
60/70	54-7/8" (1394)
80	60-3/8" (1534)



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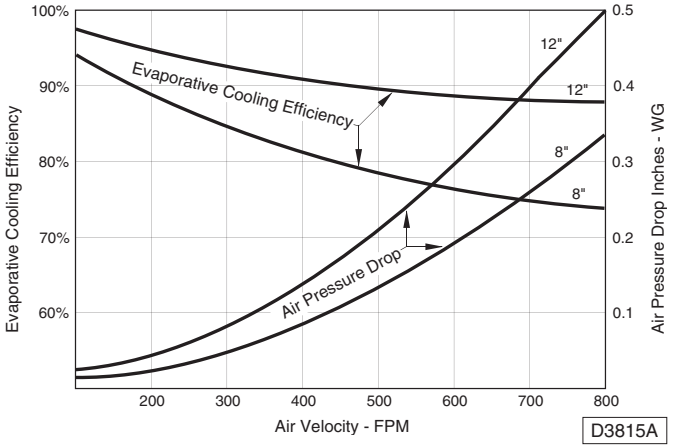
Performance and Dimensional Data

Capacity 50-80	CFM (cu. m/s) MIN.	CFM (cu. m/s) MAX.	8" Saturation Efficiency Range MIN.	8" Saturation Efficiency Range MAX.	12" Saturation Efficiency Range MIN.	12" Saturation Efficiency Range MAX.	8" or 12" Media Face Area Ft.² (m²)	8" or 12" Media Size in. (mm)	Pressure Drop in W.C. (kPa) MIN.	Pressure Drop in W.C. (kPa) MAX.	"A" Unit Width in. (mm)	Shipping Wt.* lb. (kg)	Operating Wt.* lb. (kg)
☐ 50	1,600	5,500	77	88	88	92	9.38	31 x 43-9/16	0.03	0.20	43-3/4	166	386
	(0.755)	(2.596)					(0.87)	(787 x 1106)	(0.01)	(0.05)	(1111)	(75)	(175)
☐ 60, 70	2,400	8,500	77	86	88	92	11.75	31 x 54-9/16	0.05	0.30	54-3/4	192	468
	(1.133)	(4.012)					(1.09)	(787 x 1386)	(0.01)	(0.07)	(1391)	(87)	(212)
☐ 80	3,200	8,500	77	86	87	92	1292	31 x 60	0.07	0.28	60-1/4	206	509
	(1.510)	(4.012)					(1.20)	(787 x 1524)	(0.02)	(0.07)	(1530)	(93)	(231)

*These approximate weights are for the Evaporative Cooler Module only. These weights are already included in the total unit net and shipping weights (see next page).

CELdek® EVAPORATIVE MEDIA

The Evaporative Cooler utilizes high efficiency CELdek® media. CELdek® is made from a special cellulose paper, impregnated with insoluble anti-rot salts and rigidifying saturants. The cross fluted design of the pads induces highly-turbulent mixing of air and water for optimum heat and moisture transfer. The evaporative coolers are available with standard 8 or 12 inch optional media which produce high efficiency and high face velocities, along with a 2" distribution pad to disperse the water evenly over the pads.



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EVAPORATIVE COOLER EFFICIENCY/A.P.D. CHART

STERLING® HVAC PRODUCTS

MS(50-80) (A, B)† D
Accessories Pressure Drop Table

		PRESSURE LOSS (INCHES OF WATER)									
		OPTIONAL RAINHOOD WITH		FILTERS					EVAP. PAD		OUTSIDE OR RETURN
				THROWAWAY	WASHABLE		PLEATED				
MODEL	CFM	SCREEN	ELIM	2"	1"	2"	1"	2"	8"	12"	AIR DAMPER
50	2,300	.04	.0	.08	.02	.02	.10	.06	.03	.05	.05
	2,500	.04	.06	.09	.02	.03	.12	.07	.04	.06	.06
	3,000	.06	.08	.12	.03	.04	.16	.09	.06	.09	.08
	3,500	.09	.11	.14	.04	.05	.21	.12	.08	.12	.11
	4,000	.11	.15	.17	.05	.07	.26	.16	.10	.15	.15
	4,500	.14	.19	—	.06	.09	.31	.19	.13	.20	.19
	5,000	.17	.23	—	.07	.11	.38	.23	.16	.24	.23
	5,200	.19	.25	—	.08	.12	.40	.25	.17	.26	.25
60	2,700	.03	.04	.07	.01	.02	.09	.05	.03	.04	.04
	3,000	.04	.05	.08	.02	.02	.10	.06	.04	.05	.05
	4,000	.06	.09	.12	.03	.04	.17	.10	.06	.10	.08
	5,000	.10	.13	.16	.04	.06	.24	.14	.10	.15	.13
	6,000	.14	.19	—	.06	.09	.33	.20	.14	.21	.19
70	3,200	.04	.05	.09	.02	.03	.11	.06	.04	.06	.05
	4,000	.06	.09	.12	.03	.04	.17	.10	.06	.10	.08
	5,000	.10	.13	.16	.04	.06	.24	.14	.10	.15	.13
	6,000	.14	.19	—	.06	.09	.33	.20	.14	.21	.19
	7,000	.20	.26	—	.09	.13	.43	.27	.20	.29	.25
	7,500	.22	.30	—	.10	.14	—	—	.22	.34	.29
80	3,700	.04	.06	.09	.02	.03	.11	.06	.04	.07	.06
	4,000	.05	.07	.10	.02	.03	.13	.07	.05	.08	.07
	5,000	.08	.11	.13	.03	.05	.19	.11	.08	.12	.10
	6,000	.11	.15	.17	.05	.07	.26	.16	.12	.18	.15
	7,000	.16	.21	—	.07	.09	.33	.21	.16	.24	.20
	7,500	.18	.24	—	.07	.11	.38	.23	.18	.28	.23

MS(50-80) (A, B)† D
Weights & Filter Data

Unit Weights

Approximate weights for Arrangement "D"†			
Unit Type Capacity	Net Wt.† (Lb.)	Ship Wt.† (Lb.)	Add for Outside Air Hood
MS50	1348	1595	51
MS60	1554	1812	59
MS70	1644	1902	59
MS80	1777	2040	63

Conversion 1 lb. = 0.453 kg.

†The approximate net and shipping weights shown are for a basic unit (these weights do not include the motor, air hood or any options). For the motor weight; see motor specifications sheet #MDS-1 for these weights/amperages.

Filter Data

Capacity	(Quantity) Filter Size
50	(4) 20 x 20
60, 70	(4) 16 x 20
	(2) 20 x 20
80	(6) 20 x 20

MODEL NUMBER

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	+
(MXX)	M	S	*	*	*	†	D										

DIGITS 3 & 4 = (CA) CAPACITY, DIGIT, 5 = (FT) FURNACE TYPE, DIGIT 6 = †(FM) FURNACE MATERIAL. REFER TO CATALOG FOR MODEL NUMBER DESCRIPTION.