

CHEMINSTRUMENTS
MOTORIZED DRAWDOWN COATER
MODEL EC-100
OPERATING INSTRUCTIONS

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PRODUCT DESCRIPTION

The Motorized Drawdown Coater is a precision instrument designed to provide even the smallest coatings laboratory with an affordable tool to make consistent, repeatable samples. The coating bed is a sheet of flat, float glass for consistent, smooth coatings. This is a fixed speed instrument for the preparation of laboratory samples. Please call if there are questions that are not covered in this short paper.

UNPACKING

As the machine is unpacked, please verify that the following parts have been included with the shipment. Please call immediately to inform us if we have deleted any parts.

- Motorized Drawdown Coater (1 piece)
- Glass Top (1 piece)
- Power Cord (1 piece)
- Drawdown Rods per customer request



INSTALLATION

The installation of this device is very simple.

- The unit should be set on a flat, level surface with the controls facing the user.
- The leveling feet can be adjusted to level the unit.
- The bubble in the top plate should be centered for the unit to be level.
- The Glass Top should be unpacked and set under the clip on top of the cork gasket..
- The Clip Board Clip should be raised to get the glass under this clip.
- Press the “off-on” switch to “O” (off).
- Plug the Power Cord into the outlet on the back of the machine.
- Connect the power cord to a 110 volt outlet.
- Raise the weight arm and turn the control knob to “return” to insure that the carriage is in the start position.

OPERATION

At this point the machine is ready for use. Simply turn the control knob to Return and allow the coating head to return to the rear position.

- Snap a rod into the raised weight arm.
- Insert the material to be coated under the spring clip and lower the weight arm.
- Spread the coating liquid ahead of the rod and turn the control knob to “test”.

Remove and clean the rod. Your Motorized Drawdown Coater is now ready for your next application.

APPLIED COATING AMOUNTS* WITH METERING RODS

ROD SIZE Wire #	WET THICKNESS		GRAMS DRY PER SQUARE METER PERCENT SOLIDS				POUNDS DRY PER 3000 SQ. FT. PERCENT SOLIDS			
	Mils	Microns	30%	40%	75%	100%	30%	40%	75%	100%
#2 1/2	.25	6.4	1.82	2.42	4.54	6.05	1.12	1.49	2.79	3.72
#3	.3	7.6	2.18	2.91	5.47	7.29	1.34	1.79	3.36	4.48
#4	.4	10.2	2.91	3.88	6.83	9.11	1.79	2.39	4.47	5.96
#5	.5	12.7	3.64	4.85	9.11	12.14	2.24	2.98	5.60	7.46
#6	.6	15.2	4.38	5.82	10.93	14.58	2.69	3.58	6.72	8.96
#7	.7	17.8	5.09	6.80	12.74	16.99	3.13	4.18	7.82	10.44
#8	.8	20.3	5.82	7.78	14.58	19.43	3.58	4.78	8.96	11.94
#9	.9	22.9	6.56	8.34	16.40	21.87	4.03	5.37	10.08	13.44
#10	1.0	25.4	7.28	9.71	18.21	24.28	4.48	5.97	11.19	14.92
#11	1.1	27.9	8.00	10.69	20.04	26.72	4.92	6.57	12.32	16.42
#12	1.2	30.5	8.74	11.65	21.87	29.16	5.37	7.16	13.44	17.92
#13	1.3	33.0	9.47	12.63	23.71	31.60	5.82	7.76	14.57	19.42
#14	1.4	35.6	10.20	13.60	25.51	34.00	6.27	8.36	15.68	20.90
#15	1.5	38.1	10.93	14.58	27.32	36.41	6.72	8.96	16.79	22.38
#16	1.6	40.6	11.65	15.54	29.14	38.85	7.16	9.55	17.91	23.88
#17	1.7	43.2	12.38	16.51	30.99	41.29	7.61	10.15	19.04	25.38
#18	1.8	45.7	13.11	17.49	32.78	43.70	8.06	10.75	20.15	26.86
#19	1.9	48.3	13.85	18.45	34.61	46.14	8.51	11.34	21.27	28.36
#20	2.0	50.8	14.58	19.43	36.41	48.55	8.96	11.94	22.38	29.84
#22	2.2	55.9	16.03	21.36	40.07	53.43	9.85	13.13	24.63	32.84
#24	2.4	61.0	17.49	23.31	43.72	58.28	10.75	14.33	26.87	35.82
#26	2.6	66.0	18.94	25.25	47.38	63.16	11.64	15.52	29.12	38.82
#28	2.8	71.1	20.40	27.20	51.04	68.04	12.54	16.72	31.37	41.82
#30	3.0	76.2	21.85	29.14	54.65	72.86	13.43	17.91	33.59	44.78
#32	3.2	81.3	23.31	31.09	58.28	77.72	14.33	19.11	35.82	47.76
#34	3.4	86.4	24.76	33.04	61.92	82.55	15.22	20.31	38.06	50.74
#36	3.6	91.4	26.23	34.96	65.55	87.40	16.12	21.49	40.29	53.72
#38	3.8	96.5	27.66	36.92	69.21	92.28	17.01	22.69	42.54	56.72
#40	4.0	101.6	29.14	38.85	72.86	97.13	17.91	23.88	44.78	59.70
#42	4.2	106.7	30.60	40.79	76.49	101.98	18.81	25.07	47.01	62.68
#44	4.4	111.8	32.07	42.74	80.15	106.86	19.71	26.27	49.26	65.68
#46	4.6	116.8	33.53	44.67	83.79	111.70	20.61	27.46	51.50	68.66
#48	4.8	121.9	34.96	46.62	87.42	116.56	21.49	28.66	53.73	71.64
#50	5.0	127.0	36.43	48.57	91.06	121.40	22.39	29.85	55.97	74.62
#52	5.2	132.1	37.88	50.50	94.72	126.29	23.28	31.04	58.22	77.62
#54	5.4	137.2	39.34	52.45	98.38	131.17	24.18	32.24	60.47	80.62
#56	5.6	142.2	40.79	54.39	102.00	135.98	25.07	33.43	62.69	83.58
#58	5.8	147.3	42.25	56.34	105.62	140.83	25.97	34.63	64.92	86.56
#60	6.0	152.4	43.70	58.28	109.29	145.71	26.86	35.82	67.17	89.56
#62	6.2	157.5	45.17	60.22	112.93	150.56	27.76	37.01	69.41	92.54
#64	6.4	162.6	46.63	62.16	116.56	155.41	28.66	38.21	71.64	95.52
#66	6.6	167.6	48.08	64.12	120.20	160.26	29.55	39.41	73.88	98.50
#68	6.8	172.7	49.54	66.07	123.86	165.14	30.45	40.61	76.13	101.50
#70	7.0	177.8	50.99	67.99	127.49	169.99	31.34	41.79	78.36	104.48
#72	7.2	182.9	52.45	69.93	131.14	174.84	32.24	42.98	80.60	107.46
#74	7.4	188.0	53.90	71.88	134.76	179.69	33.13	44.18	82.83	110.44
#76	7.6	193.0	55.37	73.82	138.43	184.57	34.03	45.37	85.08	113.44
#78	7.8	195.1	56.81	75.77	142.07	189.42	34.92	46.57	87.32	116.42
#80	8.0	203.2	58.28	77.71	145.73	194.30	35.82	47.76	89.57	119.42
#82	8.2	208.3	59.74	79.66	149.34	199.11	36.72	48.96	91.79	122.38
#84	8.4	213.4	61.19	81.59	153.00	203.99	37.61	50.15	94.04	125.38
#86	8.6	218.4	62.66	83.53	156.63	208.84	38.51	51.34	96.27	128.36
#88	8.8	223.5	64.12	85.48	160.28	213.69	39.41	52.54	98.51	131.34
#90	9.0	228.6	65.58	87.42	163.90	218.53	40.31	53.73	100.74	134.32

Percent Solids = $\frac{100 \times \text{Dry Coating Weight (or volume)}}{\text{Wet Coating Weight (or volume)}}$

*8lb./gallon coating weights assumed. All coating amounts are theoretical. Actual amounts applied may vary depending upon web characteristics and the rheology of the coatings.