

**MAXIMUM DISCHARGE RATES FOR CF/AB SERIES DRYERS**

This bulletin contains information for CF/AB Series Dryers which have been equipped with the following factory and field installed Max. Discharge Kits:

	CF/AB-150*	CF/AB-190*	CF/AB-270
Max. Discharge Opt. No. (Factory Installed)	MAX-150	MAX-190	MAX-270
Max. Discharge Kit (Field Installed)	MAX-150-F	MAX-190-F	MAX-270-F
* Models equipped with optional SCR Drive.			

These kits have been developed for the above listed SCR equipped dryers to provide increased drying capacity for drying systems which require only the "AB" mode of operation. Each Max Discharge kit contains the required parts for increasing the speed of the top auger, bottom auger, and meter rolls, thereby reducing the load and unload times to provide optimum drying capacity.

**IMPORTANT:** These kits are intended for automatic batch operation. Some grain damage may result if these high auger speeds are used when drying in the CONTINUOUS FLOW mode, especially at low drying capacities.

The kits cannot be installed on standard CF/AB-150 & 190 dryers (without SCR drive).

The following chart shows the approximate Bu/Hr capacity and RPM for standard production and max. capacity kit equipped dryers:

	CF/AB-150	CF/AB-190	CF/AB-270
<b>TOP AUGER</b>			
Std. Load Capacity	680	925	925
Std. Auger RPM	167	218	218
Max. Load Capacity	1,250	1,250	1,400
Max. Auger RPM	292	292	328
<b>BOTTOM AUGER</b>			
Std. Unload Capacity	400	656	770
Std. Auger RPM	125	164	218
Max. Unload Capacity	900	1,036	1,184
Max. Auger RPM	246	284	328
<b>METER ROLLS (SCR Drive)</b>			
Std. Capacity (100%)	400	650	770
Std. RPM	6.4	8.0	8.0
Max. Capacity (100%)	900	1,036	1,184
Max. RPM	14	12.9	12.3

Please note that when a dryer is equipped with one of these kits, it will affect the timer settings used for AUTOMATIC BATCH mode of operation. The enclosed "Automatic Batch Operation Charts" list the recommended initial trial settings for dryers equipped with these kits. Make sure to read this information thoroughly and retain it within your manual for future reference.

**CF/AB-150 AUTOMATIC BATCH OPERATION CHART**  
(MODELS EQUIPPED WITH MAX. DISCHARGE KIT)

- 1.- Turn "ON" circuit breakers, determine the initial grain moisture content and fill the dryer with wet grain. For initial start-up, this can be done by setting the MODE SELECTOR switch to "CF" position, with UNLOAD and FAN switch in "OFF" position. When START button is depressed the dryer should fill with wet grain. The loading timer setting may have to be temporarily increased for this operation.
- 2.- Refer to "Suggested Initial Timer Settings" within chart and set DRY TIMER depending upon initial grain moisture and drying method (dry and cool, or full heat). Also set COOL TIMER and UNLOAD TIMER as indicated in chart.
- 3.- Set the following controls as described:
  - A.- Mode Selector Switch --- "BATCH"
  - B.- Unload Switch --- "AUTO"
  - C.- Fan Switch --- "ON"
  - D.- Burner Switch --- "AUTO" (Dry & Cool)
  - E.- Meter Roll Adjust. --- 100% discharge
  - F.- MC SWITCH --- "ON", set MC thermostat to min. temp.
- 4.- Press the START BUTTON again if the CONTROL CIRCUIT light has gone "out". The fan should now be operating. After a short purge period, the burner should ignite and begin operating. Set HI-Fire and Lo-Fire gas pressures, and adjust plenum thermostat to the desired temperature. See Dryer Manual for details.
- 5.- IMPORTANT: The dryer must be continually supervised during the drying of the initial batch. Unload timer setting should completely unload dryer at the 100% discharge rate. The cooling timer setting will result in the first bushels discharged from the dryer to be slightly undercooled and the last bushels out to have excess cooling time. Adjust as required to produce the desired results, then set "MC" Thermostat and top auger timer.

**DRY AND COOL**

GRAIN TYPE	GRAIN MOISTURE (Initial/Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR.	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
Shelled Corn	17-15%	18	11	9	236	241
	19-15%	29	11	9	184	193
	20-15%	35	13	9	138	168
	21-15%	42	13	9	141	151
	23-15%	50	13	9	125	137
	25-15%	63	13	9	106	120
	27-15%	78	15	9	88	102
	29-15%	96	15	9	75	90
	31-15%	120	15	9	63	78
Wheat, Milo & Soybeans	16-13%	30	11	9	180	187
	18-13%	42	13	9	141	150
	20-13%	56	13	9	115	125

**FULL HEAT**

GRAIN TYPE	GRAIN MOISTURE (Init.-Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
Shelled Corn	19-17%	20	0	9	312	327
	20-17%	24	0	9	276	293
	21-17%	30	0	9	228	245
	23-17%	39	0	9	188	208
	25-17%	47	0	9	160	181
	27-17%	59	0	9	132	154
	29-17%	74	0	9	108	129
	31-17%	93	0	9	88	108
Wheat, Milo & Soybeans	18-13%	31	0	9	224	238
	20-13%	46	0	9	164	178
	22-13%	55	0	9	140	156

\* IMPORTANT: These initial settings, especially the unloading timer, MUST BE CHECKED during actual drying operation. Readjust timer settings as required to produce the desired results.

① Actual drying time is variable with grain physiological factors (kernel size, chemical composition, seed variety, seasonal weather), weather conditions during drying, and other operating variables; lower final moisture significantly increases drying time; moisture contents are % wet basis.

**AUTOMATIC BATCH OPERATION CHART - CF/AB-190**  
(MODELS EQUIPPED WITH MAX. DISCHARGE KIT)

- 1.- Turn "ON" circuit breakers, determine the initial grain moisture content and fill the dryer with wet grain. For initial start-up, this can be done by setting the MODE SELECTOR switch to "CF" position, with UNLOAD and FAN switch in "OFF" position. When START button is depressed the dryer should fill with wet grain. The loading timer setting may have to be temporarily increased for this operation.
- 2.- Refer to "Suggested Initial Timer Settings" within chart and set DRY TIMER depending upon initial grain moisture and drying method (dry and cool, or full heat). Also set COOL TIMER and UNLOAD TIMER as indicated in chart.
- 3.- Set the following controls as described:
  - A.- Mode Selector Switch --- "BATCH"
  - B.- Unload Switch --- "AUTO"
  - C.- Fan Switch --- "ON"
  - D.- Burner Switch --- "AUTO" (Dry & Cool)
  - E.- Meter Roll Adjust. --- 100% discharge
  - F.- MC SWITCH --- "ON", set MC thermostat to min. temp.
- 4.- Press the START BUTTON again if the CONTROL CIRCUIT light has gone "out". The fan should now be operating. After a short purge period, the burner should ignite and begin operating. Set HI-Fire and Lo-Fire gas pressures, and adjust plenum thermostat to the desired temperature. See Dryer Manual for details.
- 5.- **IMPORTANT:** The dryer must be continually supervised during the drying of the initial batch. Unload timer setting should completely unload dryer at the 100% discharge rate. The cooling timer setting will result in the first bushels discharged from the dryer to be slightly undercooled and the last bushels out to have excess cooling time. Adjust as required to produce the desired results, then set "MC" Thermostat and top auger timer.

**DRY AND COOL**

GRAIN TYPE	GRAIN MOISTURE (Init.-Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
SHELLED CORN	17-15%	18	10	10	300	308
	19-15%	28	10	10	238	250
	20-15%	34	12	10	204	217
	21-15%	40	12	10	184	198
	23-15%	48	12	10	163	180
	25-15%	60	12	10	139	157
	27-15%	75	14	10	115	134
	29-15%	93	14	10	97	117
	31-15%	116	14	10	81	100
WHEAT, MILO & SOYBEANS	16-13%	28	10	10	238	247
	18-13%	40	12	10	184	195
	20-13%	54	12	10	150	164

**FULL HEAT**

GRAIN TYPE	GRAIN MOISTURE (Init.-Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
SHELLED CORN	19-17%	17	0	10	423	443
	20-17%	21	0	10	371	394
	21-17%	27	0	10	306	329
	23-17%	36	0	10	247	273
	25-17%	43	0	10	215	243
	27-17%	57	0	10	169	197
	29-17%	70	0	10	143	171
	31-17%	94	0	10	110	136
WHEAT, MILO & SOYBEANS	18-13%	28	0	10	297	317
	20-13%	42	0	10	221	240
	22-13%	53	0	10	182	203

\* **IMPORTANT:** These initial settings, especially the unloading timer, MUST BE CHECKED during actual drying operation. Readjust timer settings as required to produce the desired results.

① Actual drying time is variable with grain physiological factors (kernel size, chemical composition, seed variety, seasonal weather), weather conditions during drying, and other operating variables; lower final moisture significantly increases drying time; moisture contents are % wet basis.

**AUTOMATIC BATCH OPERATION CHART - CF/AB-270**  
(MODELS EQUIPPED WITH MAX. DISCHARGE KIT)

- 1.- Turn "ON" circuit breakers, determine the initial grain moisture content and fill the dryer with wet grain. For initial start-up, this can be done by setting the MODE SELECTOR switch to "CF" position, with UNLOAD and FAN switch in "OFF" position. When START button is depressed the dryer should fill with wet grain. The loading timer setting may have to be temporarily increased for this operation.
- 2.- Refer to "Suggested Initial Timer Settings" within chart and set DRY TIMER depending upon initial grain moisture and drying method (dry and cool, or full heat). Also set COOL TIMER and UNLOAD TIMER as indicated in chart.
- 3.- Set the following controls as described:
  - A.- Mode Selector Switch --- "BATCH"
  - B.- Unload Switch --- "AUTO"
  - C.- Fan Switch --- "ON"
  - D.- Burner Switch --- "AUTO" (Dry & Cool)
  - E.- Meter Roll Adjust. --- 100% discharge
  - F.- MC SWITCH --- "ON", set MC thermostat to min. temp.
- 4.- Press the START button again if the CONTROL CIRCUIT light has gone "out". The fan should now be operating. After a short purge period, the burner should ignite and begin operating. Set HI-Fire and Lo-Fire gas pressures, and adjust plenum thermostat to the desired temperature. See Dryer Manual for details.
- 5.- IMPORTANT: The dryer must be continually supervised during the drying of the initial batch. Unload timer setting should completely unload dryer at the 100% discharge rate. The cooling timer setting will result in the first bushels discharged from the dryer to be slightly undercooled and the last bushels out to have excess cooling time. Adjust as required to produce the desired results, then set "MC" Thermostat and top auger timer.

**DRY AND COOL**

GRAIN TYPE	GRAIN MOISTURE (Init.-Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
SHELLED CORN	17-15%	18	10	12	405	415
	19-15%	29	10	12	318	333
	20-15%	35	12	12	275	292
	21-15%	41	12	12	249	268
	23-15%	49	12	12	222	245
	25-15%	61	12	12	191	216
	27-15%	76	14	12	159	185
	29-15%	94	14	12	135	161
31-15%	118	14	12	113	140	
WHEAT, MILO & SOYBEANS	16-13%	29	10	12	318	329
	18-13%	41	12	12	249	264
	20-13%	55	12	12	205	223

**FULL HEAT**

GRAIN TYPE	GRAIN MOISTURE (Init.-Final)	SUGGESTED INITIAL TIMER SETTINGS *			APPROX.-BU/HR	
		DRY TIMER ①	COOL TIMER	UNLOAD TIMER	DRY	WET
SHELLED CORN	19-17%	16	0	12	577	606
	20-17%	20	0	12	523	555
	21-17%	26	0	12	429	462
	23-17%	35	0	12	351	387
	25-17%	42	0	12	296	335
	27-17%	55	0	12	234	272
	29-17%	69	0	12	203	243
	31-17%	91	0	12	156	192
WHEAT, MILO & SOYBEANS	18-13%	27	0	12	413	439
	20-13%	41	0	12	304	331
	22-13%	51	0	12	257	287

\* IMPORTANT: These initial settings, especially the unloading timer, MUST BE CHECKED during actual drying operation. Readjust timer settings as required to produce the desired results.

① Actual drying time is variable with grain physiological factors (kernel size, chemical composition, seed variety, seasonal weather), weather conditions during drying, and other operating variables; lower final moisture significantly increases drying time; moisture contents are % wet basis.

**MAX. DISCHARGE RATE KIT PARTS**

PART NO.	DESCRIPTION	QTY.
<b>CF/AB-150 MAX. DISCHARGE - KIT NOS. MAX-150 &amp; MAX-150-F</b>		
017-1447-6	SHEAVE (2AK44H, 4.0 PD, TOP AUG.)	1
017-1448-4	SHEAVE (2AK49H, 4.5 PD, BTM AUG.)	1
017-1392-4	SHEAVE (AK61H, 5.7 PD, SCR)	1
019-1040-5	BUSHING (H-5/8)	3
020-1025-4	BELT (AX-31, SCR)	1
<b>CF/AB-190 MAX. DISCHARGE - KIT NOS. MAX-190 &amp; MAX-190-F</b>		
017-1447-6	SHEAVE (2AK44H, 4.0 PD, TOP AUG.)	1
017-1449-2	SHEAVE (2AK56H, 5.2 PD, BTM AUG.)	1
017-1451-8	SHEAVE (AK46H, 4.2 PD, SCR)	1
019-1040-5	BUSHING (H-5/8)	2
017-1452-6	BELT (A-28, SCR)	1
<b>CF/AB-270 MAX. DISCHARGE - KIT NOS. MAX-270 &amp; MAX-270-F</b>		
017-1448-4	SHEAVE (2AK49H, 4.5 PD, TOP & BTM AUG.)	2
017-1450-0	SHEAVE (AK44H, 4.0 PD, SCR)	1
019-1040-5	BUSHING (H-5/8, SCR)	1
017-1452-6	BELT (A-28, SCR)	1
NOTE: All of the above sheaves are for the motor drive end.		