

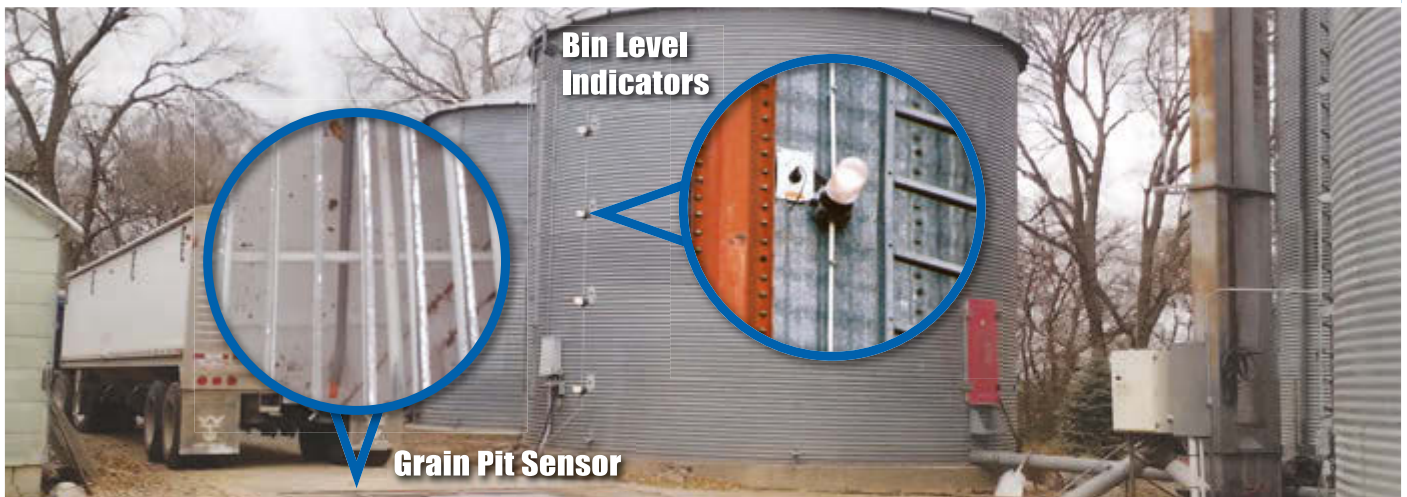
MOORE

automation

GRAIN DRYER CATALOG



◀ Grain Dryer Controls



◀ Grain Dryer Controls

2022

TABLE OF CONTENTS

KA-800DT BATCH GRAIN DRYER CONTROL	1-2
KA-770 CONTINUOUS FLOW GRAIN DRYER CONTROL	3-4
KA-770AB AUTOMATIC BATCH GRAIN DRYER CONTROL	5-6
DRYER ACCESSORIES PRICING	7
REPLACEMENT PARTS PRICING	7-8
SERVICE INFORMATION	9-10



UNBEATABLE SERVICE
24 hours a day, every day on
MOORE Automation products



KA-800DT | BATCH GRAIN DRYER CONTROL



SEQUENCE OF OPERATION

Set dry and cool time on timers and temperature set point on temperature control for precise drying.

Select Mode of Operation:

- Manual - Must use stop button to stop dryer
- Time Only - Dryer runs until dry timer stops dryer
- Time/Temperature - Dryer runs until either the dry timer or the temperature control stops dryer
- The cool time runs after burner shuts off
- Start dryer by using the fan start switch which is set up to start two fans
- Dryer can be stopped anytime by using the red stop button

Timers:

- Dry time is set in hours
- Cool time is set in minutes

Moore Automation's KA-800DT

is designed to be compatible with many new and old Fan/Heater units. The control utilizes low voltage wiring between the control and the Fan/Heater unit. The KA-710FS Relay Kit allows interfacing to any voltage used by a Fan/Heater unit.

FEATURES

- Easy to adjust dry time and cool time
- Digital temperature control
- Industrial grade switches and timers
- Rugged non-metallic enclosure
- System on/off switch
- Red stop dryer button
- Two fan start switch
- Mode select switch
- Burner on/off switch
- Clear front allows easy monitoring
- Low voltage wiring from control to fan unit
- Operate dryer from the ground level
- New Stop/Reset button to inform of power loss

KA-800DT

Batch Grain Dryer Control

The KA-800DT is designed to be compatible with many new and old Fan/Heater units. The control utilizes low voltage wiring between the control and the Fan/Heater unit. The KA-710FS Relay Kit allows interfacing to any voltage used by a Fan/Heater unit. The timers and the temperature control are the same used in the KA-600 controls so many parts are interchangeable. The KA-800DT can be operated in 3 modes: manual, time only, time or temperature. A built-in start switch for second fan can be used by adding a second KA-710FS Relay Kit. **KA-800DT is UL Listed.**

Part Number	Description	Price
KA-800DT	Automated Dryer Batch Control	\$3,399.00
KA-710FS	Fan/Heater Relay Kit	\$359.00

Stainless Steel probes are included with the KA-800DT control panel. These probes average the temperature between the two sensors and are not affected by atmospheric changes.



VST-77

CAPABILITIES



KA-800DT Specifications

- Enclosure 12 H x 10 W x 6 D NEMA 4X
- Electric supply 2AMPS 120VAC
- 24VAC outputs for Fan/Burner unit
- 24VAC Input for fan run monitor
- **VST-77** temperature probes monitor grain temperature



SYSTEMS COMPONENTS



KA-710FS

- Fan/Burner Interface Relay Kit
- 24VAC signals from KA-800DT control Fan/Burner
- KA-710FS relays are wired into high voltage control circuits in Fan/Burner unit



OPTIONS



Automatic Batch Control that can fill and empty after drying, check out the KA-700AB Automatic Batch Control.

KA-770 | CONTINUOUS FLOW GRAIN DRYER CONTROL



SEQUENCE OF OPERATION

When operating in the automatic mode, the continuous flow control fills and refills the dryer based on the level of grain. This occurs anytime the grain level drops below the fill switch.

The fan or fans run continuously and the grain temperature or time opens the dump gates for a set dump time. This cycle is continuously repeated until the fill switch is not satisfied based on set time.

The fans running, fill switch and full storage switch are monitored to assure correct operation.

Moore Automation's KA-770

concurrently fills and dumps grain 24 hours a day. Grain sensors accurately control dumping at a pre-determined temperature setting. The KA-770 allows all day-to-day functions to be performed on switches mounted to the exterior of the control panel. Electronic sensors accurately prevent under or over drying based on grain temperature and are not affected by external weather conditions. Safety features include fill overflow, full storage, low grain and fan/heater monitoring. The digital display informs the operator of the error in the event of a dryer shut down.

FEATURES

- Economical control for EZ Dry or Top Dry type grain dryers
- Controls fill augers, dry time and dump gates
- Records number of dumps
- Rugged non-metallic enclosure
- Adjust timers, temperature and operation via operator screen
- Monitors dryer operation and stops on error condition with error displayed on operator screen
- Easy to dry on time or temperature
- Optional wet bin low switch monitor



KA-770

Continuous Flow Grain Dryer Control

The KA-770 is designed for automatic batch filling and dumping of grain, 24 hours a day. Grain sensors accurately control the dumping of grain at a pre-determined temperature setting. The KA-770 allows all day-to-day functions to be performed on switches mounted to the exterior of the control panel. Electronic sensors accurately prevent under or over drying based on grain temperature, and are not affected by external weather conditions. Safety features include overflow, full storage, low grain and fan/heater monitoring. The digital display informs the operator of the error in the event of a dryer shutdown.

KA-770 is UL Listed.

Part Number	Description	Price
KA-770*	Automatic Control w/Temperature Sensor	\$7,199.00
KA-621	Level Paddle Switch (2 required)	\$179.00
KA-710FS	Fan/Heater Relay Kit (1 required for each Fan/Heater)	\$359.00
KA-770-P	Pump Contactor Panel 25AMP 2HP(max) 230VAC Controlled by 24VAC Signal from KA-770 or KA-770AB	\$899.00

Stainless Steel probes are included with the KA-770 control panel. These probes average the temperature between the two sensors and are not affected by atmospheric changes.

***Note: if using the new pump control from MFS/ Stormor that includes the pump contact panel, the KA-770-P is not needed. However this contactor is controlled by a 12VDC relay and will need to be changed out with our 24VAC relay (part # RT424524) to work with our control box. Price \$12.99.**



Grain Temperature Sensor

Displays operating mode and status, dump time and hold time, number of dumps, and error condition which caused dryer to stop



Adjust the following on the operator screens:

- Delay to start fill cycle
- Delay to stop fill cycle
- Delay stop on auger 2 so it can clean out
- Dump time and hold time between dump cycles
- Microprocessor monitors safety inputs and will stop dryer if necessary with the stop error displayed on screen

SPECIFICATIONS



KA-770 Specifications

- Enclosure 18 H x 16 W x 10 D NEMA 4X
- Electric supply 2AMPS 120VAC field wiring for:
 - 24VAC output for Fill Augers
 - 24VAC output for Dump Pump
 - 24VAC output for Fans and Burners
 - 24VAC for Fill Switch
 - 24VAC for Fill Storage Switch
 - 24VAC for Fan Run Monitor



Dump Pump Contractor Panel



KA-621



KA-710FS

SYSTEM COMPONENTS



KA-770-P Contractor panel for dump pump

- Electric supply 25AMPS, 230VAC, 1 Phase Rated 2HP Max.
- 24VAC input for control signal from KA-770

KA-621 Grain Switch

- Stainless steel housing with 24VAC inductive sensor, moisture resistant

KA-710FS Fan Heater Relay Kit

- Required for each fan/heater unit on the dryer

KA-770AB | AUTOMATIC BATCH GRAIN DRYER CONTROL



SEQUENCE OF OPERATION

When operating in the automatic mode, Automatic Batch Control first completely fills the dryer, then fill augers stop. Fans and burners are automatically started, grain is dried on time, set point or temperature. The fans can stop or run continuous as the grain dump gates are opened. The bin wall switch monitors the grain level to assure dryer has emptied.

Once dryer is empty the cycle starts over and the fill auger starts to fill the dryer and the sequence repeats until the wet supply is depleted.

Moore Automation's KA-770AB

concurrently fills and dumps grain 24 hours a day. Grain sensors accurately control dumping at a pre-determined temperature setting. The KA-770AB allows all day-to-day functions to be performed on switches mounted to the exterior of the control panel. Electronic sensors accurately prevent under or over drying based on grain temperature and are not affected by external weather conditions. Safety features include fill overflow, full storage, low grain and fan/heater monitoring. The digital display informs the operator of the error in the event of a dryer shut down.

FEATURES

- Economical control for EZ Dry or Top Dry type grain dryers
- Controls fill augers, dry time and dump gates
- Records number of dumps
- Rugged non-metallic enclosure
- Adjust timers, temperature and operation via operator screen
- Monitors dryer operation and stops on error condition with error displayed on operator screen
- Easy to dry on time or temperature
- Optional wet bin low switch monitor



KA-770AB

Automatic Batch Grain Dryer Control

The KA-770AB is designed for automatic batch filling and dumping of grain, 24 hours a day. Grain sensors accurately control the dumping of grain at a pre-determined temperature setting. The KA-770AB allows all day-to-day functions to be performed on switches mounted to the exterior of the control panel. Electronic sensors accurately prevent under or over drying based on grain temperature, and are not affected by external weather conditions. Safety features include overflow, full storage, low grain and fan/heater monitoring. The digital display informs the operator of the error in the event of a dryer shutdown.

KA-770AB is UL Listed.

Part Number	Description	Price
KA-770AB	Auto Batch Control w/Temperature Sensor	\$7,699.00
KA-621	Level Paddle Switch (3 required)	\$179.00
KA-710FS	Fan/Heater Relay Kit (1 required for each Fan/Heater)	\$359.00
KA-770-P	Pump Contactor Panel 25AMP 2HP(max) 230VAC. Controlled by 24VAC Signal from KA-770 or KA-770AB	\$899.00

Stainless Steel probes are included with the KA-770AB control panel. These probes average the temperature between the two sensors and are not affected by atmospheric changes.

* NOTE: if using the new pump control from MFS that includes the pump contractor panel, all that is required is change the part number to 24VAC-KA-770AB.



Grain Temperature Sensor

Displays operating mode and status, dump time and hold time, number of dumps, and error condition which caused dryer to stop



Adjust the following on the operator screens:

- Delay to start fill cycle
- Delay to stop fill cycle
- Delay stop on auger 2 so it can clean out
- Dump time and hold time between dump cycles
- Microprocessor monitors safety inputs and will stop dryer if necessary with the stop error displayed on screen

SPECIFICATIONS



KA-770AB Specifications

- Enclosure 18 H x 16 W x 10 D NEMA 4X
- Electric supply 2AMPS 120VAC field wiring for:
 - 24VAC output for Fill Augers
 - 24VAC output for Dump Pump
 - 24VAC output for Fans and Burners
 - 24VAC for Fill Switch
 - 24VAC for Fill Storage Switch
 - 24VAC for Fan Run Monitor



Dump Pump Contractor Panel



KA-621



KA-710FS

SYSTEM COMPONENTS



KA-770-P Contractor panel for dump pump

- Electric supply 25AMPS, 230VAC, 1 Phase Rated 2HP Max.
- 24VAC input for control signal from KA-770

KA-621 Grain Switch

- Stainless steel housing with 24VAC inductive sensor, moisture resistant

KA-710FS Fan Heater Relay Kit

- Required for each fan/heater unit on the dryer

DRYER ACCESSORIES PRICE LIST

Optional Wet Bin Switches



All switches require a relay to switch power loads such as motors, lights and horns.

Part Number	Description	Price
KA-621	Level Paddle Switch	\$179.00

MA-135 Grain Level Light



The MA-135 turns the light on when the grain reaches the sensor switch in the bin and comes complete with a prox switch and a 120VAC cord set.

This unit may remain portable or can be installed in a bin and wired permanently.

Part Number	Description	Price
MA-135	Jar Light/Relay Box Enclosure Complete w/Sensor	\$199.00



REPLACEMENT PARTS LIST

KA-600DT Batch Grain Dryer Control

Part Number	Description	Price
310001	Digital Display w/Temp Adjustment	\$189.00
362050	Door Latch for Hoffman Enclosure Relay (set of 2)	\$69.00
600015	Relay, DPDT 120VAC	\$39.00
600016	Relay, DPDT 240VAC	\$29.99
600954	Socket, 8 Pin Din Mount	\$12.99
600956	Socket, 11 Pin Din Mount	\$22.99
705001	Switch, Toggle SPST	\$4.99
705024	Switch, 2-Pole, 3-Position	\$9.99
705201	Boot, Pushbutton Waterproof	\$2.99
705202	Boot, Toggle Switch Waterproof	\$3.99
705301	Switch, N.O.(Start) Momentary Pushbutton	\$12.99
705302	Switch, N.C. (Stop) Momentary Pushbutton	\$16.99
810021	Timer, ON Delay	\$229.00
645218	Probe Set, Stainless Steel	\$359.00

KA-621 Inductive Paddle Switch

Part Number	Description	Price
KA-621P	Switch, Stainless Steel (Paddle Only)	\$69.00
IG0330	Switch, 20-280V Inductive Sensor Poly	\$89.00

REPLACEMENT PARTS LIST

KA-700DT / KA-800DT Batch Grain Dryer Control

Part Number	Description	Price
310001	Digital Display w/Temp Adjustment	\$189.00
362050	Door Latch for Hoffman Enclosure (Set of 2)	\$69.00
400039	Fuse, 3AG 2AMP	\$2.00
405202	Fuseholder, Indica 12-24V PLCD (10/Box)	\$11.00
405203	Fuseholder, Indica 120V PLCD (10/Box)	\$13.00
600027	Relay, Plugin DPDT 24VAC Spade	\$21.99
600954	Socket, 8 Pin Din Mount	\$12.99
810021	Timer, ON Delay	\$229.00
645218	Probe Set, Stainless Steel	\$359.00

KA-710 Continuous Flow Grain Dryer Control

Part Number	Description	Price
145824	COMM Cable DV-1000 to PLC	\$47.00
280001	PLC, PLCD, F1-13DR	\$599.00
280210	PLC, PLCD, Operator Interface (DV-1000)	\$450.00
310001	Digital Display w/Temp Adjustment	\$189.00
362050	Door Latch for Hoffman Enclosure (Set of 2)	\$69.00
400039	Fuse, 3AG 2AMP	\$2.00
600301	Relay, DPST 20A 120VAC	\$22.99
600954	Socket, 8 Pin Din Mount	\$12.99
705001	Switch, Toggle SPST	\$4.99
705003	Switch, Toggle SPDT for Dump	\$10.99
705006	Switch, Toggle SPDT - Fan Start	\$16.99
705201	Boot, Pushbutton Waterproof	\$2.99
705202	Boot, Toggle Switch Waterproof	\$3.99
705301	Switch, N.O. (Start) Momentary Pushbutton	\$12.99
705302	Switch, N.O. (Stop) Momentary Pushbutton	\$16.99
645218	Probe Set, Stainless Steel	\$359.00

KA-770 / KA-770AB Continuous Flow Grain Dryer Control

Part Number	Description	Price
130213	Battery, Lithium Coin (D0-06)	\$6.00
280027	PLC, PLCD, D0-06DR DR IN/Relay	\$599.00
281261	PLC, PLCD, Operator Interface	\$300.00
566341	HMI Replacement Kit	\$440.00
310001	Digital Display w/Temp Adjustment	\$189.00
362050	Door Latch for Hoffman Enclosure (Set of 2)	\$69.00
600027	Relay, Plugin DPDT 24VAC Spade	\$21.99
600920	Socket, 14 Pin Din Mount Small	\$11.99
645218	Probe Set, Stainless Steel	\$359.00

KA-710FS Fan Relay Kit

Part Number	Description	Price
600019	Relay, Plugin DPDT 120VAC	\$21.99
600027	Relay, Plugin DPDT 24VAC Spade	\$21.99
600954	Socket, 8 Pin Din Mount Small	\$12.99
600956	Socket, 11 Pin Din Mount	\$22.99
605301	Resistor, Power 5W	\$2.99

SERVICE INFORMATION

MOORE AUTOMATION, INC.

411 Main Street East, P.O. Box G
Trimont, MN 56176

Call us toll-free: 877-767-6897

Phone: 507-639-9031 Fax: 507-639-6488

Email: mooreaut@frontiernet.net

www.mooreautomationinc.com

Office Hours: 8 a.m. - 5 p.m. Monday - Friday

Support Hours: 24 hours a day, every day on MOORE Automation products

It is the intent of MOORE AUTOMATION INC. to provide our customers with the best service possible. Our highly trained technicians and software personnel will assist you in every reasonable way to see this goal is achieved.

MERCHANDISE RETURN FOR REPAIR

Merchandise WILL NOT be accepted without prior authorization. An authorization number, unit description and the nature of the problem is REQUIRED at our service center prior to return.

SERVICE POLICY

It is the obligation of each dealer, distributor and OEM to handle his customer complaints, warranty adjustments and installation requirements. It is the goal of MOORE AUTOMATION to see that our products operate as designed. We will assist you in every reasonable way to see that this goal is achieved. If a dealer, distributor or OEM cannot solve the problem, he should contact our service department in writing or by phone for our trained service technician's assistance.

When you receive approved return merchandise authorization for at-the-factory service, the merchandise may then be returned freight prepaid, with an RMA number issued by MOORE AUTOMATION INC.

When the equipment is out of warranty or the user is responsible for failure, our current rates will apply for all service work performed.

All service work performed on equipment is subject to conditions of the warranty.

All service charges and expenses are payable in cash in U.S. currency upon pickup or at the time of delivery.

SERVICE TRAINING

MOORE AUTOMATION will have Service Training sessions periodically. All distributors will be welcome to attend.

We will come to your business and train your employees and customers. Please call to schedule a time.

SERVICE INFORMATION

MOORE AUTOMATION POLICY

MOORE will repair any of the products which become defective under normal use during a period of 12 months from date of installation. This warranty shall not extend to any product which has been;

(i .) subject to misuse, neglect, accident, damage in transit, abuse or unusual hazard, (ii .) altered or modified by anyone other than MOORE or (iii .) used in violation of instructions furnished by MOORE.

IN NO EVENT SHALL MOORE BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OR EXPENSES INCLUDING, BUT NOT LIMITED TO, LOSS OF USE, LOSS OF PROFITS OR LOSS OF DATA; OR FOR LOSS, DAMAGE OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM THE INABILITY OF DEALER/DISTRIBUTOR OR ANY END USER TO USE OF THE PRODUCT EITHER SEPARATELY OR IN COMBINATION WITH ANY OTHER EQUIPMENT. THE FOREGOING WARRANTY SHALL EXTEND ONLY TO DEALER/DISTRIBUTOR AND IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESSED, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.

In no event shall MOORE'S liability hereunder for failure to deliver or breach of any provision of this agreement, including, without limitation, MOORE'S obligation with respect to non-conforming items, exceed, with respect to the product, the price of the relevant product. MOORE shall not be liable for any incidental or consequential damages suffered by virtue of the failure of the product to operate properly. MOORE'S liability is limited to the repair or replacement of product during the warranty period.

The warranty provided hereunder shall be effective only if the Dealer/Distributor promptly gives notice to MOORE of any defects. MOORE will **not** be required to accept the return of any equipment unless it first receives timely notice and then provides Dealer/Distributor with approval and instructions of the return. It is the Dealer/Distributor's responsibility to return the defective equipment to MOORE at the Dealer/Distributor's expense. Transportation charges for the return of the equipment to Dealer/Distributor will be paid by MOORE; except that if MOORE determines the equipment returned for warranty correction is not defective within the terms of the warranty, then the Dealer/Distributor shall pay MOORE all of the costs of handling and transportation. MOORE'S sole responsibility under the warranty will be, at it's option, either replace or repair any component which fails during the warranty period due to defect in workmanship and/or materials. The installation of replacement equipment or components, in the field, under the warranty, is the responsibility of the Dealer/Distributor. All replacement equipment or parts become MOORE'S property. In the case of replacement parts supplied or repairs made during the warranty period, the warranty period in respect to the replacement parts or repair part shall terminate with the termination of the warranty period respecting the original product or parts. Replacement or repair of component parts will not extend the warranty on the original product.

SERVICE DEPARTMENT RATES

Service Department rates for 2022 are set at \$150.00/ hour with a minimum of one hour.

ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. PRICES DO NOT INCLUDE FREIGHT OR TAX.

MOOREAutomation inc.

Toll Free: 1-877-767-6897 507-639-9031

411 Main St. E, Trimont, MN 56176 Email:mooreaut@frontiernet.net www.mooreautomationinc.com