KARDVEYER SPECIFICATIONS

SECTION V
KARDVEYER
General Information

All units include Electronic [ye Safety Devices and Safety Touch Bars, Safety Status Panels, and Hand Crank assembly. Trays are furnished as separate items. Unit prices include sliding doors.

All units shipped assembled except for posting board which must be attached at customer location.

DIMENSIONS:

UNIT HEIGHT	50”	
UNIT WIDTH	86 1/4,101 1/2'	
UNIT DEPTH	44 3/16"	With Posting Board
	34 3/16"	Without Posting Board
POSTING BOARD DEPTH HEIGHT	11”	Overall
	10”	Extension beyond front of unit.
	32”	from floor to top surface on 50" high units

FINISHES:

STANDARD ACCENT PANEL COLORS:

Accent Blue - 024
Corporate Green - 161
Golden Tan - 130
Pearl Gray - (‘20
Guincy Blue - 166
Rimfire Roan - 162

Rust - 151
Salem Blue - 164
Slate Blue - 015
vintage Grape - 165
Wall Street Gray - 163

Base is black, interior is pearl gray and trays are pearl gray.

POSTING BOARD TOPS One piece molded laminate with rounded edges. Laminates available are:

Gunstock Walnut	Blue Nebula
Erin	Windsor Mahogany
Spektrum	Blue Moraine
Hunter Nebula	

SHIPPING TERMS: F.O.B. Factory
FACTORY POINT: Marietta, Ohio

KARDVEYER SPECIFICATIONS

1. Scope
This specification sets forth the general product requirements for the KARDVEYER electromechanical filing, storage and retrieval units. It delineates the performance requirements, characteristics, construction and environmental considerations.

2. Power Requirements
The KARDVEYER unit shall require a single phase grounded electrical service of no less than 15 amperes with a voltage of 105 VAC to 125 VAC from 50 to 60 Hz. The Kardveyer shall have the Underwriters Laboratories Listing.

3. Human Factors
The location of controls shall be within arm's reach when sitting or standing at the posting board. The keyboard assembly shall be at the reference level, 32 inches above the floor on 50 inch high units. Maximum distance from front of operator's work station to last entry of media shall be 25 3/8 inches.

4. Safety
Safety devices shall be designed to stop the conveyor system if any obstruction exists above the posting board and through the vertical path of the front door when opened or between the carrier and top panel. These devices will be designed "fail-safe". Two non-identical systems shall be incorporated to provide redundancy. Maximum safe stopping distance of the conveyor system shall not exceed 3/4~.

5. Front Safety Eyes and Upper Safety Eye
Front safety eyes shall be designed to provide a curtain of light (consisting of 8 equally spaced light beams) using pulsed infrared beams to protect the area exposed when the front door has been moved down to its opened position and one pulsed infrared beam to protect between carriers and the top panel.

6. Safety Bar
A safety bar shall be designed on the upper portion of the front door and have a downward travel of 3/4" to provide safety at the posting level. The top of the safety bar shall be 1 inch above the posting surface when the door is in the opened position.

7. Carriers for Tray Filing of Media

Carriers shall be made in two inside widths: 84.15", and 68.88". All carriers shall be 12.06" front to rear on the inside. Garners shall provide for tray filing of media sizes 5 X 3, 6 X 4, 7 3/8 X 3 1/4 (tab), 8 X 5 and checks. All media to be filed in trays from front to rear.

The carriers shall be designed to effectively contain the trays when the conveyor system is in motion. Limitations on size shall be as follows.

8. Tray Filing of Card Sizes Carrier Pitch

4 1/2"
5 1/4"
6"

Maximum vertical Space Available

4"
4 3/4"
5 1/2"

9. Tracking
Garner stabilizer tracks and arms shall be designed to provide stability to each end of the carrier throughout the complete carrier travel circuit. This shall be accomplished by using two stabilizer rollers at each carrier end. The roller guide tracks shall consist of upper and lower curved portions and vertical portions. One of the two rollers will always be in an effective section of stabilizer track at each end of the carrier.

10. Controls
Each KARDVEYER unit is equipped with basic controls that enable you to start, stop and completely direct the operation of it.

SECTION V ELECTROMECHANICAL SPECIFICATIONS (11/98)

10.1. Master On/Off Switch

Depressing the "ON" switch will turn the unit "ON". If the ON/OFF switch fails to light, verify that the power cord is plugged into an electrical outlet. The unit may be turned off at any time.

10.2. Safety Status Panel

The KARDVEYER unit safety system continually monitors the proper operation of the unit and prevents operation of or abruptly stops the unit if any safety sensor has been activated. Status of this system is indicated on a Safety Status Panel which is located directly above t he "ON/OFF" switch.

10.3. Keyboard Console

The keyboard console provides complete control to scan or select media stored in the unit. The console consists of a numeric touch pad, display and index windows.

a. Clear key:
Any level selection may be cleared or canceled by depressing "CLEAR". A new level selection may then be entered.

b. Level Selection:
A level may be selected by entering one or two digits of the selection and depressing "ENTER". The selected level will be immediately brought to the posting position.

c. Scanning:
Levels may be scanned at any time by depressing either "UP" or "DN". Scanning will stop when the key is released.

d. Memory:
In addition to the normal memory during scanning, any displayed selection may be temporarily stored for later recall. One of two memory modes may be selected during installation; Single Reference or Multiple Buffer Mode.

1. Single Reference Mode:
Any displayed selection may be temporarily stored in memory for later recall by depressing "MS" memory stored selection may be recalled to the display and selected at any time by depressing "MR" memory recall. The selection is not erased from memory when recalled; it will remain in the memory until another selection is stored.

2. Multiple Buffer Mode:
Multiple level selections may be entered and stored by depressing "MS" after each entry. Up to forty selections may be stored before a long tone will indicate the buffer is full. Selections may be recalled in the order they were stored by depressing "MR". Each selection is erased from memory when recalled.

e. Safety Functions:
The unit will abruptly stop if any safety system has been activated. The Safety Status Panel will indicate the particular condition that stopped the unit.

f. Audible Signal:
A short tone confirms each key entry.

g. Load Indicator:
The display will flash once per second when the media weight being lifted is more than 80% maximum imbalance allowed for the unit.

11. Keyboard Selector Panel Assembly

A keyboard selector panel and two digit display shall be provided and located near the front and at the center of the posting board surface. The selector panel shall be a ten digit keyboard to be used for carrier selection. The selector panel shall also include a "CLEAR" key. The "CLEAR" key shall be capable of clearing the display and stopping the conveyor system at any time. The "ENTER" key shall cause the unit to continue moving to the level previously selected after having been stopped due to activation of a safety device while the unit was in motion.

The selector panel shall also include an "UP" and "DN" (down) key. These may be used to operate the unit in the desired direction to scan the files. After using the "UP" or "DN" key, the previously selected carrier will be posted by depressing the "ENTER" key and the display will indicate the previously selected number.

12. Control Switch and Safety Status Panel

The control switch shall be used to control power application to the unit.

The safety status panel shall indicate all safety systems are clear by lighting a green light labeled NORMAL at the top of a column of four lights. Three additional red lights, when one or more is lit, shall indicate a safety system activated. These red lights shall be labeled as follows from the top down: upper safety eye, front safety eye and safety bar.

13. Control Circuits

Control circuitry shall be solid state and designed with a modular concept. Relays may be used for switching when current is not flowing through the relay contacts. The control circuits shall be mounted on a removable chassis which will be accessible from the right side of the unit. The following conditions shall also be provided for:

a. The control shall be designed for ease of maintenance.
b. The circuitry shall control carrier positioning to within plus or minus 1/4" of the posting level.
c. The micro processor control shall be designed to provide movement through the shortest path for bringing carriers to the posting level.
d. Adequate protection of the unit under stalled and overloaded conditions.
e. Power requirements:
   105 ~AC to 125 VAC from 50 to 60 Hz.
   .25 AMP or less with motor not running.
   6 AMP average with motor running.
   12 AMP maximum with motor running and under maximum imbalance conditions.
f. Transient Condition
   Shall consist of transient current during unit cycle start operation not exceeding 15 amps for a maximum duration of 0.2 seconds.

seconds.

14. Posting Board

A work surface for operator convenience shall be located directly in front of the access area. It shall be designed to withstand a static load of 250 pounds centrally located without yielding.

The posting board shall extend over the entire width and out from the front of the unit 10".

The working surface shall be one piece construction of 5/8" thick 45-lb. density particle board covered with a surface material which shall be durable, smooth, easy to clean and of a decorative nature.

15. Sliding Doors

Two sliding doors shall be provided on the upper front portion of the unit. They shall close off the access area and will be equipped to work in conjunction with latching and locking mechanisms to provide security for the stored media. The vertical sliding door shall be counterbalanced such that not more than ten pounds force shall be required to move it in either the up or down direction. The sliding doors shall move in guide channels which are assembled to the end support assemblies.

16. Carriers vs. Load

Carriers shall be available in two widths -84.15" and 68.88", each with a load capacity of 165 pounds. The widest carrier shall be designed in such a manner that not more than .200" static deflection of front or rear carrier angles shall occur at center when subjected to the maximum load of 165 pounds evenly distributed.

17. Tray Filing

Trays shall also be designed to house the card size media 5 X 3, 6 X 4, 8 X 5, check and tab, filed front to rear. (5 X 3 media - .45 lbs/filing inch, 6X4 media -.72 lbs/filing inch, 8 X S media - 1.2 lbs/filing inch, check media - .80 lbs/filing inch, and tab media .71 lbs./filing inch, tight packed condition.) The card size trays shall be single compartment trays.

All trays shall be equipped with followers to provide support of media when partly filled. The trays shall be designed to be retained by the carriers when the conveyor system is in motion. Maximum vertical space available shall be described in Section V Page 38.

18. Cycle Time

One complete cycle time, with the conveyor system balanced, will be the time required from entering an instruction, via the keyboard carrier selector panel, until the requested carrier is delivered to the access area.

Each complete cycle time describes conveyor operator time. The minimum, average and maximum cycle times will be as follows:

Carriers Per Unit	Unit Height	Minimum	Average	Maximum
10	50"	1.8 sec.	4.4 sec.	8.7 sec.
12	50"	1.6 sec.	4.6 sec.	9.1 sec.
14	50"	1.4 sec.	4.6 sec.	9.1 sec.

19. Conveyor Imbalance

The conveyor system shall be capable of transporting loads up to a 350 pound maximum imbalance condition.

20. Reliability

The equipment shall be designed for a service use of ten years when operated in eight hour shifts, five shifts per week. Average conveyor movement time shall be one hour per week. Service use shall be considered all time when power is on.

21. Maintainability

The equipment shall be designed to enable front panel and end panel access for maintenance and repair.

22. Size

The KARDVEYER units shall be designed in standard height, widths and depth as follows:

a. Heights

All KARDVEYER units shall be made in a standard height of 50".

b. Widths

The KARDVEYER units shall be made in two standard widths, 86 1/4" and 101 1/2".

c. Depth

The KARDVEYER unit shall be made in one standard depth, 44 - 3/16" including posting board extension of 10~'.

KARDVEYER STEEL GAUGES

The following list of major Kardveyer assemblies has been prepared by our Engineering Department for your information.

Trays	26GA	(.018")
Tracks	16 GA	(.059")
Main Column Assembly	14 GA	(.075")
Carrier Body	16 GA	(.059")
Carrier Lips	11 GA	(.120")
Base Spreader Front	12 GA	(.1 OS")
Base Spreader Rear	12 GA	(.1 OS")
Spreader Between Columns	14 GA	(.075")
Skins	18 GA	(.047")
Suspension Arms	3/16' x 2" wide	
Chain for Conveyor	#60 (3/4" pitch)	
	Tensile Strength = 8,500 lbs.	

KARDVEYER

Unit Configuration (Without Trays)

Overall Dimensions H	W	Number of Carriers	Maximum Recommended Load/Carrier Lbs.	Weights Net	Shipping Weights
50	86-1/4	10	165	1100	1336
		12		1186	1430
		14		1316	1550
50	101-1/2	10	165	1254	1460
		12		1358	1594
		14		1515	1742

KARDVEYER TRAY

Shipping Weights

TRAY		CATALOG NO.	NO. OF TRAYS PER CARTON	CARTON WEIGHT
Check w/follower	8 23/32 x 3 1/2	2548292.1	20	42
Check w/Rod	8 23/32 x 3 1/2	2548291.1	20	48
5 x 3		2548284.1	36	48
6 x 4		2548288.2	20	38
8 x 5		2548294.1	20	50
Tab		2548290.1	20	38

INSIDE WIDTH AND DEPTH OF CARRIER

Width of Unit	Carrier Width	Carrier Depth
101"	84.1"	12.062"
86-1/4"	68.8"	12.062"

Carrier Lip; Front - 1.5"

Carrier Lip; Back - 1.5"