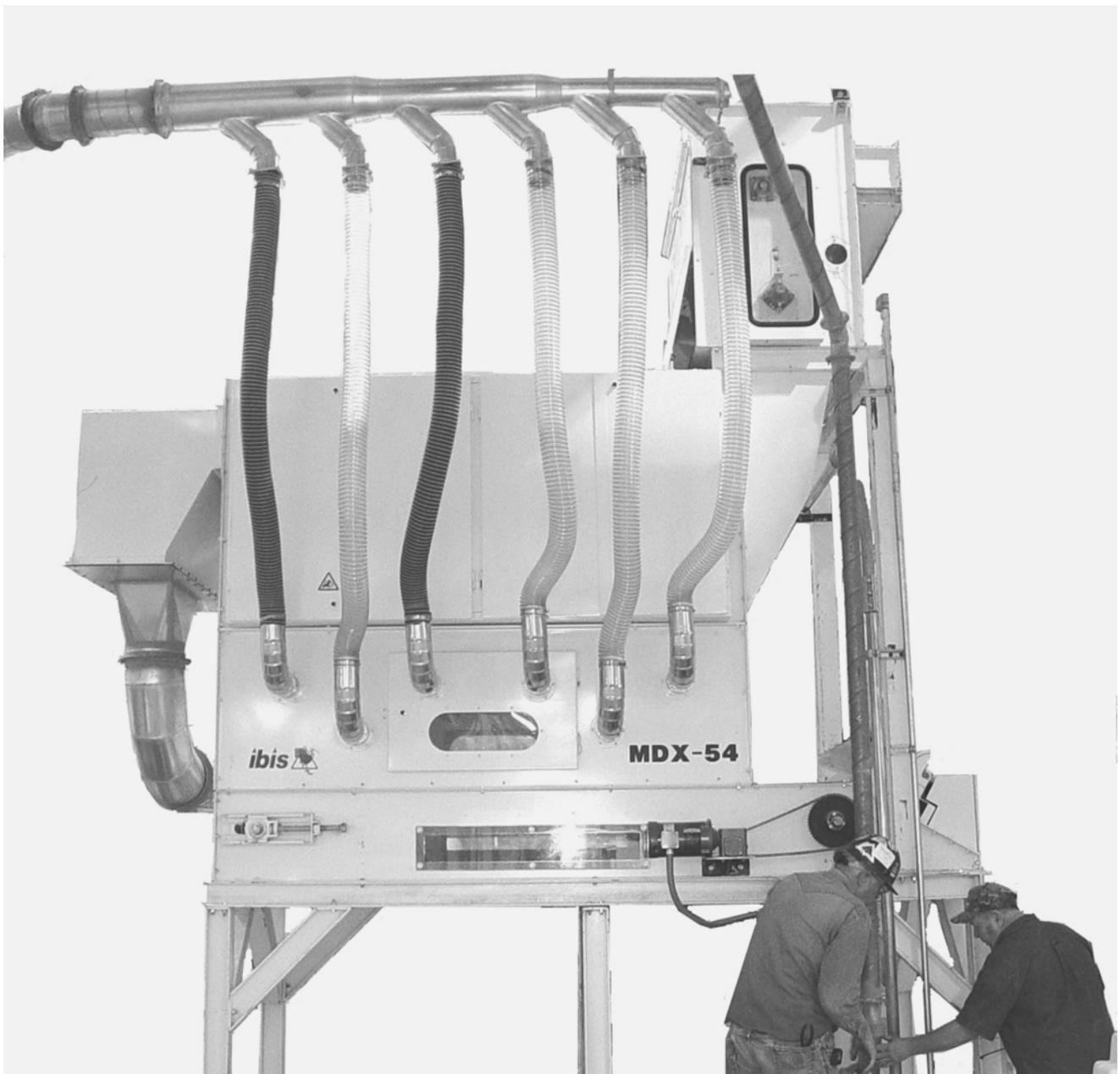




MDX-54 - INSTALLATION & OPERATION MANUAL



INTRODUCTION

The Ibis MDX-54 is used as the primary separator of the FLUFF (cellulose fiber) and SAP (Super Absorbent Polymer) classifier system of the soft disposable reclaim process. Typically, the MDX-54 is used after an Ibis Fluff Separator system to remove SAP from FLUFF, out of reclaim. The MDX-54 is key to the separation of SAP and FLUFF.

THEORY OF OPERATION

FLUFF and SAP enter the MDX-54 from either a Pneumatic Separator (such as an Ibis D-147 x 54) or an Ibis Rotary Condenser (such as an Ibis 48 x 54 condenser) which the discharge of these feed material into the MDX-54 inlet. The FLUFF/SAP mix then travels through a series of beater rolls, which separate and straighten the FLUFF fibers. This action releases the SAP from the FLUFF. The SAP then falls through the perforated screens beneath the beater rolls, onto the conveyor bed below. In the process of beating the material, FLUFF fines will also fall through the perforated screens. Draft tubes under the screens pull the FLUFF fines out of the MDX-54 thereby separating the FLUFF fines from the SAP. Once on the conveyor, SAP and some FLUFF fines travel past a draft hood on the conveyor end which removes any 'fluff balls' that gather on the conveyor belt.

Once through the conveyor section, the SAP and some minute FLUFF fines fall into a vibratory tray and are separated a third time, by drawing air from the vibratory tray. At the vibratory tray discharge, SAP is removed via a transfer fan and the SAP is then conveyed to the Ibis Aspirator for further classification.

INSTALLATION

The Ibis MDX-54 comes assembled in sections on pallets. Uncrate the MDX-54 sections and position it in your factory using conventional industrial lifts and tools. The beater section weighs in excess of 3000 lbs. [1364 Kg] so a heavy forklift capacity is required to lift this section above the conveyor section. The sections that must be assembled on the MDX-54 are as follows:

- 1) MDX-54 Beater & Mid section to Conveyor section.
- 2) Draft tubes of the MDX-54 Mid section.
- 3) Fluff take-off manifold, flex hose, screw bands and blast gates.
- 4) All peripheral ducting required for operation.

Please refer to the MDX-54 layout drawing when assembling the MDX-54. The fluff manifold and dust taps must be mounted in accordance to typical ducting support codes in your area. The fluff manifold is to be mounted in a position close enough to allow the flex hose from the MDX-54 to reach. It is critical to install blast gates to every dust tap point on the MDX-54, in order to balance the airflow and optimize separation efficiency.

ELECTRICAL REQUIREMENTS

All electrical components correspond to required plant voltage at 50-60HZ and are required to be wired to the control panel for operation and control. Refer to local codes for wire sizes and cabling practices. There are two motors that require wiring:

- 1) Beater roll motor – 15HP
- 2) Conveyor drive motor – 1-2HP

The above motors are typically controlled by the Ibis control panel. Please refer to the electrical drawings for wiring instructions. The vibratory tray is complete with a controller that is operated by plant voltage of 110/1/50-60HZ. This controller is equipped with a receptacle plug.

ADJUSTMENTS

There are adjusting points on the MDX-54 that affect the operation. These adjustments are static in nature and must be adjusted according to actual ambient conditions and cannot be set at the factory:

- 1) Bleed gates: There are several bleed gates around the MDX-54 that can be adjusted to optimize airflow.
- 2) Blast gates: Blast gates on all the dust pickup points must be adjusted to optimize efficiency.
- 3) Dust Hood: The conveyor dust hood has a cover that is used to target airflow and pick up ‘fluff balls’ from the end of the conveyor.
- 4) Vibratory control: This adjusts the vibration of the vibratory tray and aides in the last classification process of the MDX-54.
- 5) Conveyor speed: On the control panel is a speed pot for adjusting the MDX-54 conveyor drive.

MAINTENANCE

The MDX-54 needs a dedicated operator to constantly monitor operation and material buildup. Due to the speed of material flowing through the MDX-54, conditions can change rapidly and an operator must be present. Beyond the presence of an operator, the MDX-54 has the following maintenance schedule:

Hourly: Inspect the beater and mid section for buildup of FLUFF and SAP. Depending on humidity levels and improper adjustment of airflow, buildup can occur. Inspect the flow of material through the MDX-54 to make certain there are no clogs in the product path.

Daily: Inspect the operation of the beater rolls and drive belts to make certain the machine is operating. Inspect the conveyor drive and belt tracking. Inspect the vibratory tray for proper feeding of material. Inspect all related fans for proper operation.

Weekly: Inspect the beater roll bearings for wear. Inspect the beater roll drive components. Inspect the conveyor drive and conveyor belt for any signs of wear. Inspect fan drives and bearings for wear.

Monthly: Lubricate all bearings with the proper grease. Check conveyor drive reducer oil level and fill if needed. Lubricate related fan bearings, using proper grease and tighten belts, if needed.

GENERAL NOTE

In high humidity areas, SAP tends to stick to any surface, which is the nature of this product. SAP reacts to water/humidity and steps should be taken to keep the humidity level at or below 55%. Above 55% and you will see a marked change in the behavior of the SAP. SAP will build up on any contact surface if the humidity is above 55% and this is not a design flaw in the Ibis equipment, this is the nature of Sup Absorbent Polymer.

SPARE PARTS

When ordering, please be sure to include the equipment serial number.

QTY	PART #	DESCRIPTION
1	40RIV	#40 CHAIN 10 FEET
1	G150066	15HP 230/460 12 LEAD 1750 RPM 254T MOTOR
1	GF1015AG	MDX-54 REDUCER 10:1 RIGHT ANGLE
1	MOT1HP460-56C	MDX-54 CONVEYOR MOTOR 1HP 230/460 56C
4	BX60	V-BELT BX-60
1	BX79	V-BELT BX79
1	NBK52	V-BELT SHEAVE IDLER
4	VPS-228	PILLOW BLOCK BEARING 1-3/4"
1	6029K32	TENSIONER BEARING 1-1/2" BORE
1	5967K88	CAST IRON FLANGE BEARING 1-1/2"
1	4022288	CONVEYOR BELT PVC120 53" X 223"



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