



FS-200 - INSTALLATION & OPERATION MANUAL



INTRODUCTION

The Ibis FS-200 is used as the primary separator of the FLUFF (cellulose fiber) classifier system of the soft disposable reclaim process. Typically, the FS-200 is used to remove FLUFF & SAP, (Super Absorbent Polymer) out of reclaim soft disposables. The maximum material throughput of the FS-200 is 1000 Lbs/hr. [450 Kg/Hr] but Ibis recommends lower throughput, to maximize efficiency of material separation.

THEORY OF OPERATION

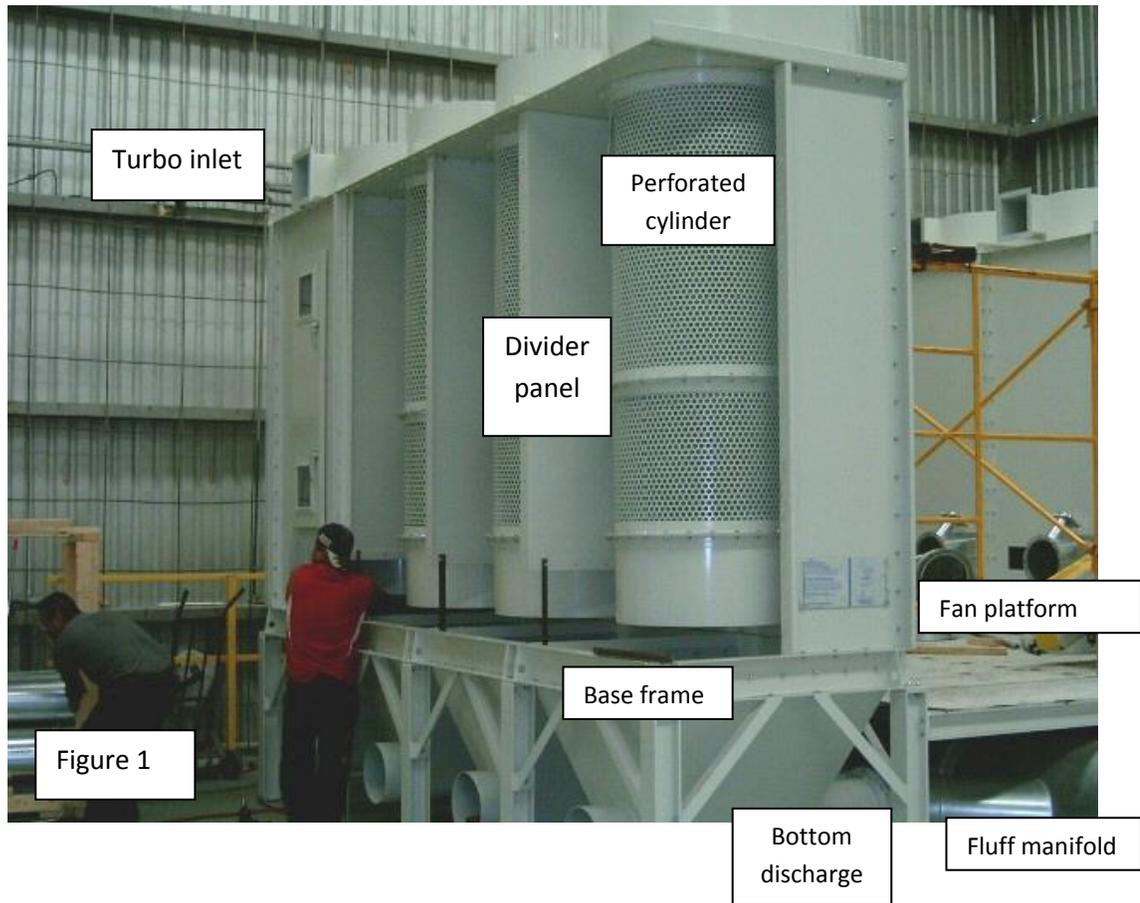
Soft disposables typically are pneumatically conveyed to the FS-200 from an Ibis debaler. The soft disposables travel into the first fan which is an Ibis 'Choppermax' fan. This fan opens the product while conveying it to the first stage of the separator. Through, a series of cyclonic separators and efficient air balancing, the internal components of the product are separated from the plastic liner. After separation, the plastic liner is typically conveyed to either an Ibis Pneumatic Separator or Ibis SC-50 and into a baler. The Fluff/SAP is conveyed to either a MDX-54 SAP extractor, a FLUFF/SAP baler, or reintroduced into the product line via an Ibis Volumetric Feeding System.

INSTALLATION

Please refer to the FS-200 layout drawing when assembling the FS-200. There are several steps involved in assembling the FS-200 system:

- 1) **BASE FRAME and FAN PLATFORM:** The base frame is a welded assembly to which the wall panels and FS-200 internal components are attached.
 - A) Starting at a corner, attached one end panel and one fan-side wall panel, to create a corner.
 - B) Attach a middle divider to the fan-side wall panel and temporarily clamp in place.
 - C) Attach a 'inlet turbo' to the end roof panel and place on the wall panel top flanges at the corner. Make certain the turbo is rotated correctly.
 - D) Attach the specified perforated cylinder to this section. Depending on which end being assembled, use the appropriate size perforated for this section.

See Figure 1, next page



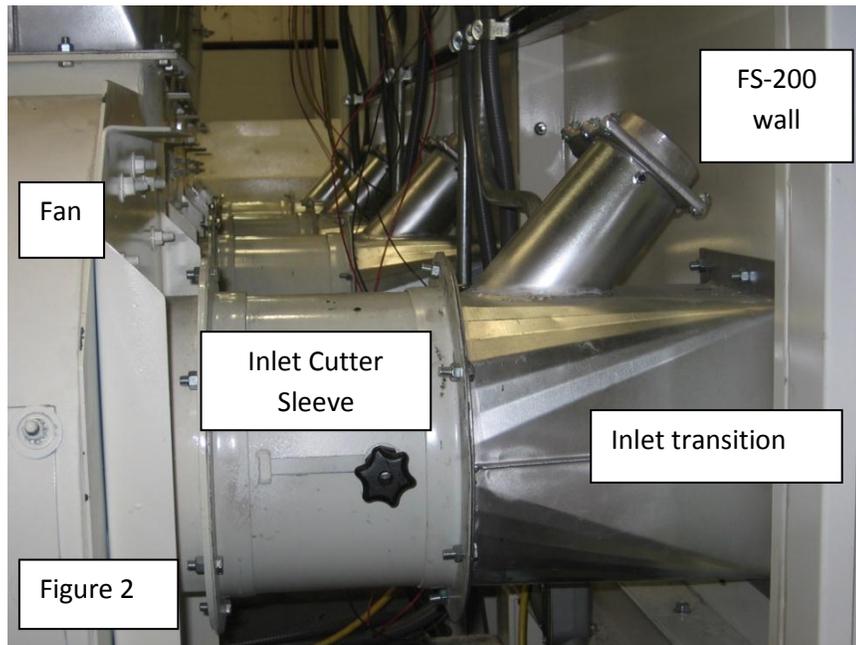
Item D, continued:

Please refer to the assembly drawing closely as there are different size perforated sleeves for each section, depending upon product type and size of the FS system. The stages are in specific order in relation to where material enters the FS-200. If the material entrance is mirrored, the stage numbers must mirror with it. In figure 1 above, notice the braces for the internal walls between the perforated cylinders. These are needed to support the structure until the perforated cylinders are completely installed and the front wall panels are in place.

- E) Once the perforated cylinders are in place, attach the bottom discharges while the door-side wall panels are off the FS-200. Make certain that the flange of the bottom discharges is facing the FAN PLATFORM SIDE of the FS-200. The bottom discharge flanges are to be connected to the Fluff Manifold of the FS-200 later. Attach the bottom discharge blast gates at this time on the opposite side of the Bottom Discharge duct.
- F) Attach the Fluff Manifold to the FS-200 Bottom Discharge flanges. This manifold is fabricated in pieces, so the manifold must be fit to the FS-200 using standard ducting practices.
- G) Attach the Fan Platform to the FS-200. The platform connects to the FS-200 legs. Please refer to the supplied Fan Platform assembly drawing. The process is as follows: Assembly the platform beams separate from the FS-200 and slide into place. Attach the mid-supports to the platform frame. Attach the Platform tread plate to the top of the Fan Platform frame.

H) At this point, the fans can be mounted to the fan platform. Make certain the fans are placed in the correct position. An IE-11BB 'Buster' fan is always in this position 1, followed by IE-11 Scrap fans in the remaining positions. When positioning the fans, there are two components required at the fan inlet.

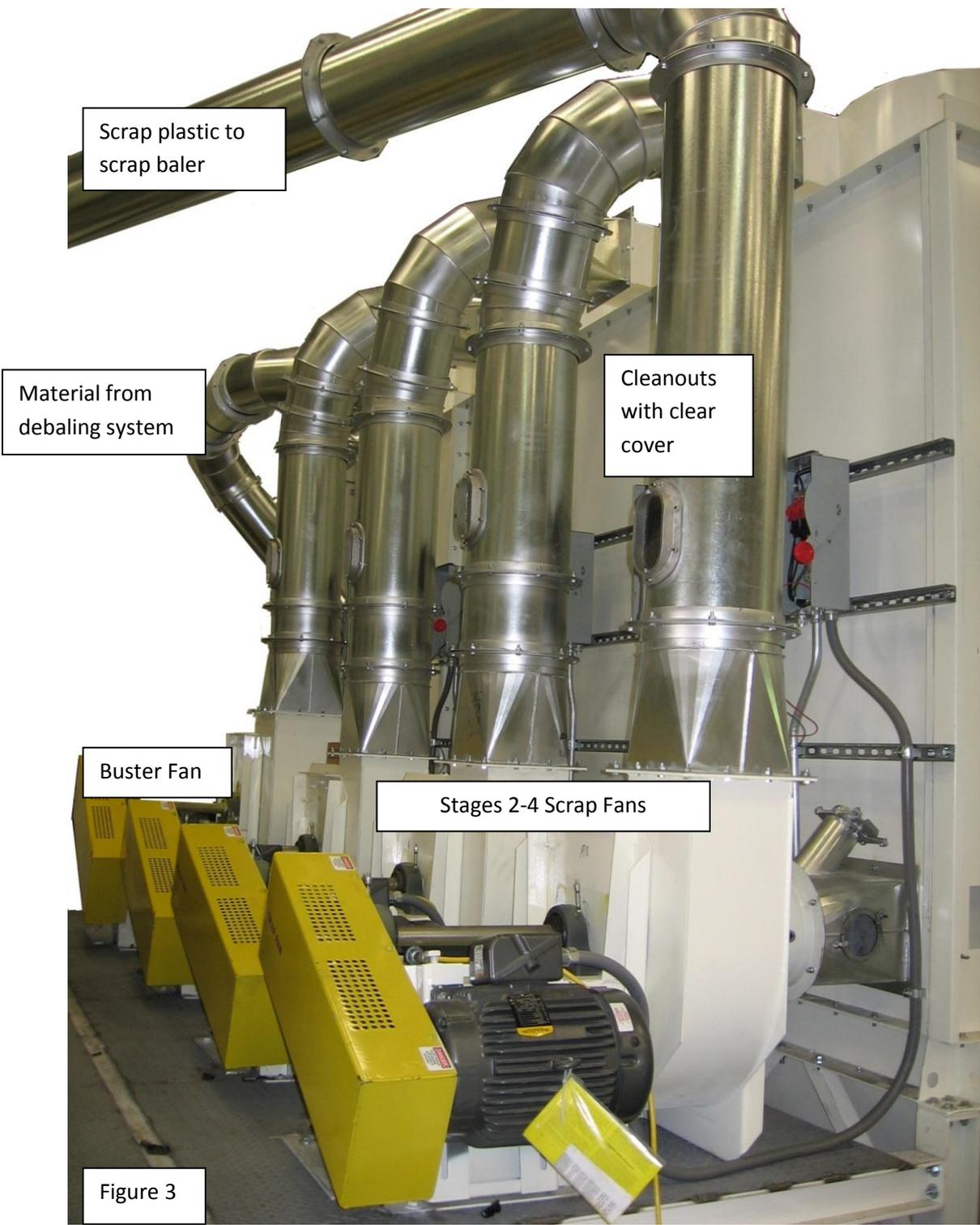
See Figure 2 next page.



As shown above, each fan receives an Inlet Transition and Inlet Cutter Sleeve on the inlet of the fan. The cutter sleeves are designed to adjust how the product is opened when entering the fan. The closer the inlet sleeve, the more the product will open.

I) Once the fans are in position, the outlet ducting to the FS-200 is to be installed. Depending upon the FS-200 orientation, either end will be Stage 1. Shown above, the fan in the background is the Stage 1 Buster fan, followed by the Scrap fans at Stages 2-4. To aid in visually seeing product flow, Ibis recommends that cleanouts with clear covers be added to the outlet ducting. As shown above, Stage 1 receives material from the Ibis Debalancing system. Once material passes through Stage 1 and enters the Buster fan, the outlet ducting runs to the Stage 2 turbo inlet and so on. The Stage 4 fan outlet will typically send the scrap plastic to an SC-50 over a scrap baler. The fan outlet ducting is sent in two pieces and must be fit using standard ducting practices.

See Figure 3, next page



Scrap plastic to
scrap baler

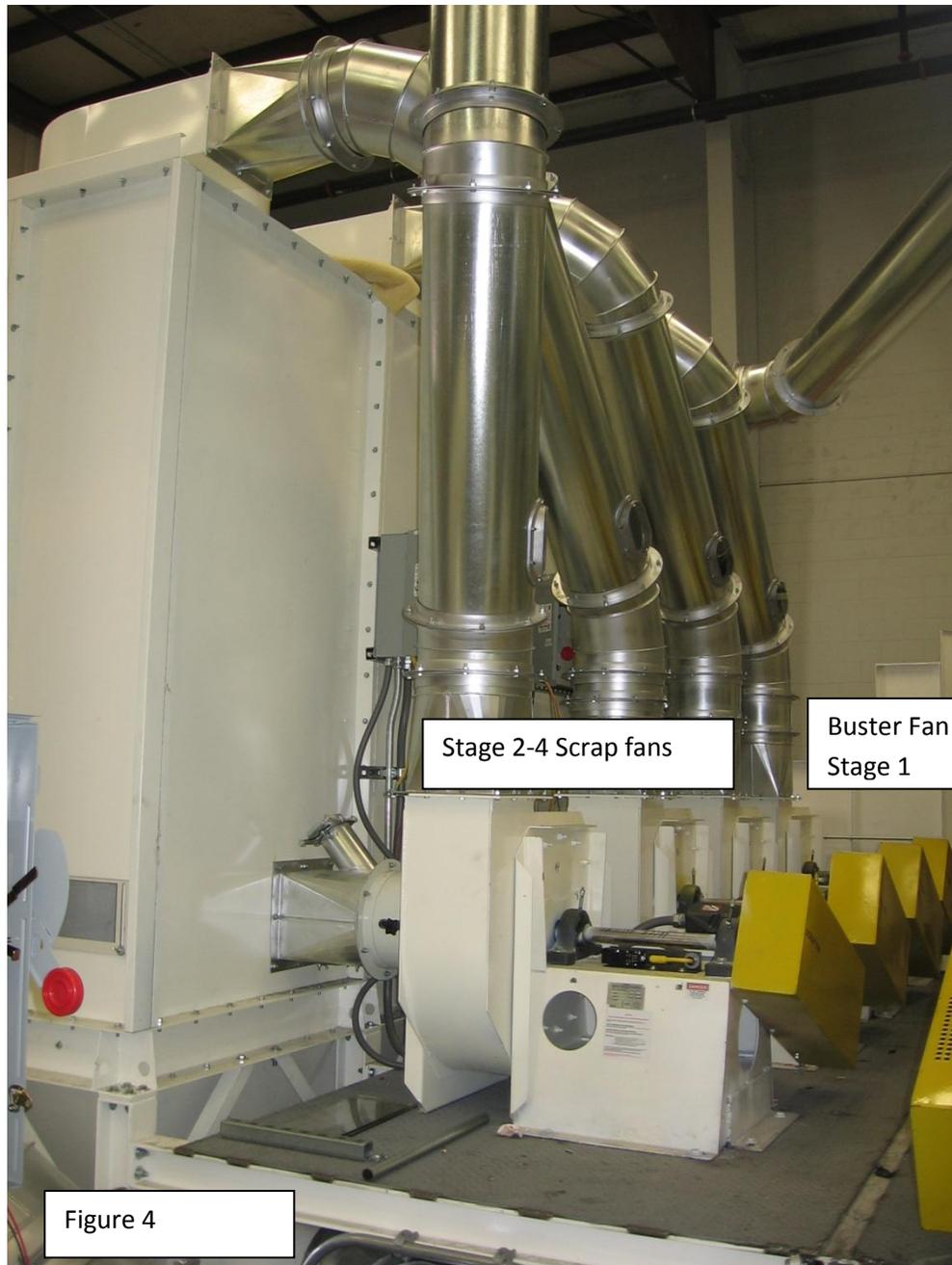
Material from
debaling system

Cleanouts
with clear
cover

Buster Fan

Stages 2-4 Scrap Fans

Figure 3



Above, another view of FS-200 ducting in Figure 4. Material enters through turbo inlet in background.

This concludes the assembly instructions.

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. The only wiring required for the FS-200 are the fans for Stage 1-4. Be certain that the fans are rotating in the correct direction, by “bumping” the fans with power temporarily and checking rotation.

ADJUSTMENTS

There are adjusting points on the FS-200 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 FS-200 that can be adjusted to optimize airflow.
- 2) Blast gates: Blast gates on the Fluff Manifold and Bottom Discharge must be adjusted to optimize separation efficiency.

These adjustments must be made by trial and error. The ultimate reference to how well your FS-200 system is working is by analyzing the plastic waste. One will see traces of FLUFF and SAP in the plastic waste, but the majority should be cleaned away. If this is not the case, the FS-200 needs adjustment. Please contact Ibis for a Technical Service visit, to optimize your system.

MAINTENANCE

The FS-200 needs a dedicated operator to constantly monitor operation and material buildup. Due to the speed of material flowing through the FS-200, conditions can change rapidly and an operator must be present. Beyond the presence of an operator, the FS-200 has the following maintenance schedule:

Hourly: Inspect the perforated cylinders for material buildup. A buildup of material in The FS-200 cannot be avoided. 'bearding' (material collection on the perforated cylinders) does occasionally occur and is the nature of the separation process, due to opposing airflows present and static buildup. If there are high (or extremely low) humidity levels and improper adjustment of airflow, buildup can be a constant problem. A dedicated employee is needed to inspect and blast away material with a compressed air wand, when buildup occurs. Also Inspect the flow of material through the FS-200 to make certain there are no clogs in the product path.

Daily: Inspect the operation of the fans/drive belts. Replace any worn belts and bearings.

Weekly: Inspect the fan bearings for wear.

Monthly: Lubricate all fan bearings with the proper grease. Check fans for vibration during operation.

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

There are no wearing parts for the FS-200 system except the fans operating the airflow. Please refer to the specific fan data sheets for spares data. If there is damage caused by other causes, please refer to the Ibis International contact information below for assistance.



Ibis International, Inc.
9663 Jackson Trail Rd
Hoschton, GA 30548 USA
Phone: (706) 654-3232
Fax: (706) 654-3888
Contact: sales@ibis-usa.com
Parts Inquiry: partsdept@ibis-usa.com