OSPREY Newsletter

FALL 1991

Drum Forming - New Direction for Soft Disposables

by Marty Price, Product Development

In the Soft Disposables Industry drum forming is rapidly taking over the older belt forming process. Forming a disposable pad in a moving pocket makes a better product faster and offers several advantages to manufacturers. The thickness of the pad can be controlled by pocket depth and suction pressure and the density of the pad can be controlled by suction pressure regardless of pad thickness and/or pocket depth. Profiling becomes relatively easy since the fluff is removed above the top of each individual pocket. The drum forming process has high production speeds with equal or improved quality. Also, less raw material is used in most drum forming operations.

If a manufacturer is considering a new drum forming line or converting an existing line to drum forming, several key issues must be addressed. Most pocket drum formers require more forming air than their belt-type predecessors. More air and greater static pressures are needed to form in a pocket. Osprey has had considerable experience in the last four years modifying filters on older belt-type lines and designing process air solutions for new drum forming lines. Our approach in most cases is to use two fans and increase drum filter capacity.

One fan is a forming fan sized to handle the exact air requirement of the forming section. Its pressure duty is set up for 50%-75% of the total pressure required to form the pad. The second fan, known as the booster fan is usually of the "clean air" variety and is located on the outlet of the clean air side of the drum filter. This placement keeps the filter under a negative pressure. This fan is sized to handle the air volume not only of forming but of auxiliary dust or vacuum requirements of the production line. Its pressure duty is sized for 25%-50% of the total forming vacuum required. The operation of these two fans in concert will provide excellent forming air volumes and pressures. When the operation of the stripper fan is considered, the result is a very dependable process air package that is designed to enhance the drum forming machine. A big part of the secret is careful attention to proper air handling.

Textile Filter Conversion - Manual to Automatic

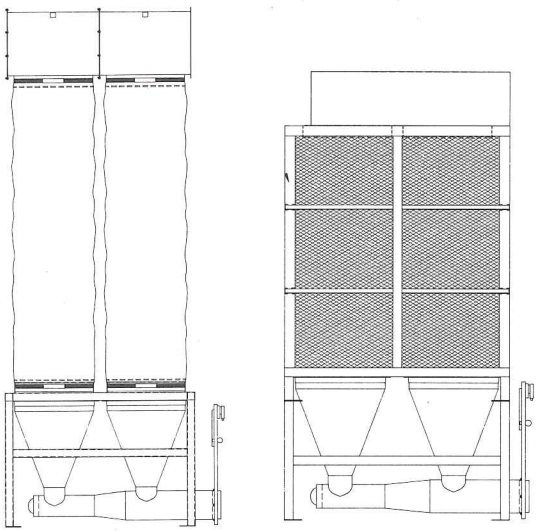
by Marty Price, Product Development

For many years Osprey has built two passive-type collectors used in the textile finishing business, the Osprey Modular Lint Filter also known as the MLF and the Osprey VSC which stands for Vertical Sleeve Collector. During the last five or six years with a slight rating change these filters have found their way into the Plastics Industry as well.

Both the MLF and the VSC are relatively inexpensive, quick to install and easy to relocate if needed. However, both must be manually emptied and cleaned. During the last 3 or 4 years Osprey has helped several customers modify these collectors to produce an inexpensive Central Plant Collection System.

The MLF "E"

Continued on page 4



INSIDE

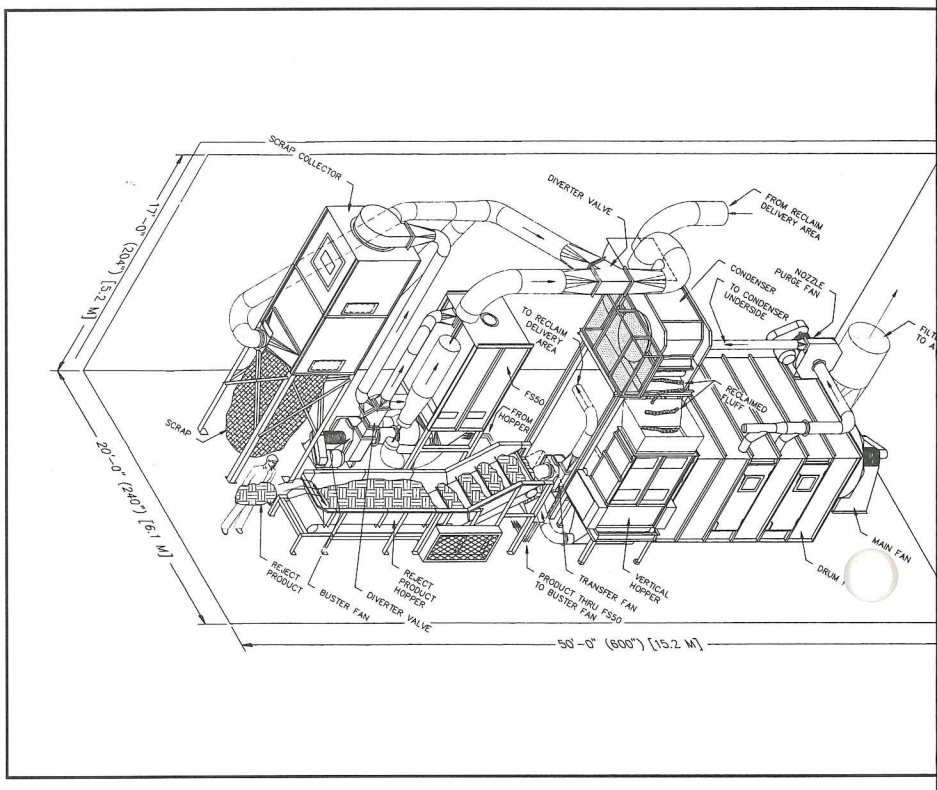
Osprey Reintroduces New Compact Fluff Separation System

By Marty Price, Product Development

Osprey is reintroducing its Model FS-50 recirculation-type Fluff Separation System, designed for separation and reclaim of fluff pulp from reject soft disposable products. The "new and improved" system uses a single separator in repeated stages or cycles. Product is fed for a timed period and then recirculated through the single separator. At the end of the second time period, scrap is exhausted to the Osprey SC-50 Scrap Collector where the remaining fiber and dust is removed and the scrap is discharged into a bag or baler. The single separator having exhausted all of its scrap is now ready for the process to repeat.

All fluff removed from the single separator and the Scrap Collector is delivered to an Osprey Fluff Handling Condenser where the fluff is removed from the airstream and can be baled or metered back to a production line. The relatively clean air exhausting the Condenser is further filtered by an Osprey Rotary Drum Filter.

The Osprey FS-50 System offers many advantages such as moderate space requirements, lower equipment costs and reduced installation time and expense. Previously rated at 220 lbs. per hour infeed (100 Kg/Hr), recent improvements have allowed the system to handle continuous basis with contact our Sales D questions or need fu



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Osprey Represented "Downunder"

Dougmac Pty. Ltd. has been representing Osprey in Australia and New Zealand since 1987. Their expertise with manufacturers in the Paper, Textile, and Process Air Industries has made them an invaluable asset to Osprey in the Downunder and beyond. Doug MacGregor founded the company in 1983 and was the sole representative for major pulp & paper producers until 1986.

After receiving a Management Certificate in Engineering, Doug began his career in the design of heating and ventilation systems. He then spent nearly 30 years with H.P. Gregory & Company in Engineering Dust Control and Process Air Systems. During those years he became Divisional Manager in specialized systems and equipment for the Pulp and Paper Industry. When the company closed in 1983 Doug lost no time in establishing Dougmac Pty. Ltd. He has spent a great deal of his time traveling in North America, working with licensors, and designing and supervising installations.

Phil Scott worked with H.P. Gregory & Co. as well as managing an Engineering Shop and working in industrial air conditioning. His experience with air filtration equipment made Phil an excellent addition to Dougmac. In the last few years Bruce MacGregor, Doug's son, has joined the company as Field Supervisor and Contracts Manager. Bruce acquired a Mechanical Engineering Certificate and spent several years in vehicle design and plant specification and purchasing at the head office of the Sydney County Council before joining Doug and Phil. Daphne Parkin, who keeps the order at Dougmac, completes the picture. These four represent major companies in the Process Air, Pulp & Paper, Plastic, and Printing Industries in Europe, Australia, New Zealand, and North America. I are in the area, their telephone number is 61-2-774-5044, fax number is 61-2-774-5192.

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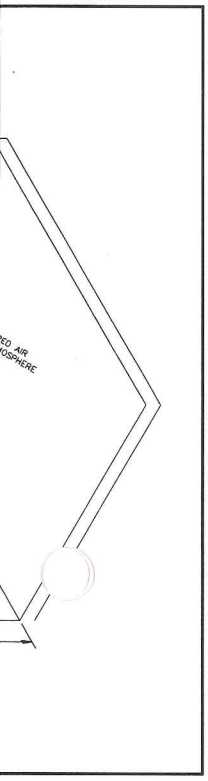

Osprey FS-50 System

The Osprey fluff separation system is designed for separation and reclaim of fluff pulp from reject soft disposables such as diapers, feminine hygiene products, incontinence pads, meat/poultry pads, and other similar products.

The advantages of using an Osprey FS-50 system are in the cost savings, which come from two sources: using reclaim fluff instead of buying virgin pulp, and reducing the cost of discarding reject products, such as landfills or other types of garbage collection. Since reject products are organized and removed in an orderly manner, the FS-50 system also provides for a cleaner manufacturing facility.

The total savings is based on how much fluff can be reclaimed and used. Taking into consideration the following assumptions and calculations, money is to be gained by reclaiming fluff from reject products.

Assumption #1 *- For one diaper machine operation assume 90,000 units per shift. A three-shift operation over five days per week would produce, at a 5% reject rate, 67,500 reject diapers per week.*

Assumption #2 *- At 67,500 units per week, and a 48-week working year, we have 3,240,000 reject diapers per year per machine.*

Assumption #3 *- Pad weight of the reject diaper is 40 grams. Therefore, we have 129,600 kilograms of fluff. The amount of reclaimable fluff is 95% or 123,120 kilograms of fluff. We will further assume that the Osprey FS-50 system is operating at its lowest capacity of 85%, which will yield 104,652 kilograms per year, or 104.652 metric tons of fluff.*

Assumption #4 *- If we collect 104.652 metric tons of fluff from reject products in a year's period of time, we will, at a cost of $660.00 per metric ton, have $69,070.32 per diaper machine.*

In conclusion, the money spent per year for the fluff that is contained in reject products can be regained and used to make more quality products. The Osprey FS-50 system will pay for itself in a very short period of time.

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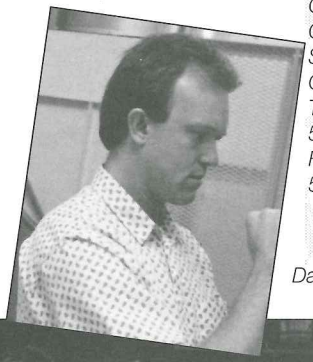
Osprey Field Technicians

You may see one of these people in your Plant. Osprey's Field Technicians, Richard Dziezic, John Beckum, and David Colburn travel all over the world installing Osprey Systems. Dave Colburn has been Osprey's Installation Supervisor for three years. Prior to Osprey he had 15 years experience in the Soft Disposable Industry in research & development, maintenance, installation, and supervision. Dave is married and has 3 children, who keep him very busy when he is not on the road for Osprey. In addition to coaching softball and family camping trips, Dave tries to spend some time golfing and fishing.

John Beckum started with Osprey 13 years ago. Originally a sheet metal fabricator, John's experience includes assembly, and research & development. He has nt the last 7 years in field service and installation. Married with 2 children he's a deer hunter and enjoys fishing. He is also a cliff climber and a coin collector. We discovered recently that John even writes a little poetry.

Richard Dziezic has been with Osprey in assembly and field installation for 4 years. Prior to Osprey he spent 10 years in installation and assembly with a textile research & development company. Richard is married and has 2 children. An avid outdoorsman he enjoys all forms of fishing. He's a scuba diver and an amateur astronomer. In the last year he has refurbished three power boats which he intended to sell. He still has all three of them.



David Colburn

(L to R) John Beckum, Richard Dziezic

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The Most Common Causes of Dust Emissions

By David Colburn

Holes in media
Improperly installed media, not covering cage section fully
*Media velocity too high (80-95 FPM recommended)
Improper duct placement causing incoming air to impact media
Improper seal installation
Holes in plenum wall
Reduced Suction of the Stripper Fan
Poor quality media

**Media velocity is calculated by dividing the media area (Ft2) into the total air volume. Below is a table of the media area of the different size drums.*

Model No.	Media Area Ft² (M²)	Model No.	Media Area Ft² (M²)
4-1	26 (2.42)	6-6	234 (21.74)
4-2	52 (4.83)		
4-3	78 (7.25)	7-1	45 (4.18)
4-4	104 (9.66)	7-2	91 (8.45)
4-5	130 (12.08)	7-3	136 (12.63)
		7-4	181 (16.82)
5-1	32 (2.97)	7-5	226 (21.00)
5-2	64 (5.95)	7-6	271 (25.18)
5-3	96 (8.92)	7-7	316 (29.36)
5-4	128 (11.89)		
5-5	160 (14.86)	8-1	52 (4.83)
5-6	192 (17.84)	8-2	104 (9.66)
		8-3	156 (14.49)
6-1	39 (3.62)	8-4	208 (19.32)
6-2	78 (7.25)	8-5	260 (24.15)
6-3	117 (10.87)	8-6	312 (28.99)
6-4	156 (14.49)	8-7	364 (33.82)
6-5	195 (18.12)	8-8	416 (38.65)

Textile Filter Conversion - Manual to Automatic

continued on from page 1

model and the VSC are fairly simple. The plastic collection bags on the bottom of the MLF-E are removed and small hopper cones take their place. While with the VSC a bottom-mounting plate with hopper cones is added. These hopper cones are purged one or two at a time by a central high-suction fan which transports all collected material to another small collector located in a remote area, possibly over a baler. By use of an electronic timer and pneumatic blast gates only a small quantity of air is required to purge quite a number of collectors.

One clear advantage of this automation is greatly reduced manual material handling and collector cleaning. A secondary benefit is that these collectors are generally located in the production area and, therefore, nearly all of the original transport air is returned to the area from which it came saving valuable heated or cooled air. This benefit is not always realized by larger, more expensive Central Collection Systems. The more basic MLF "I" type requires the addition of new inner sleeves, bottom-mounted hoppers and flanges and holes installed in the bottom pan. Support legs are needed as well.

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