

## Mactenn Systems Ltd. Installation Case Study: **Fish Food Conveying Systems, Norway.**

Two dense-phase pneumatic conveying systems were supplied to handle 35t/h of fish food pellets over a distance of 80m horizontal and 28m vertical. The systems were 857 liter vessels with a 200mm pipe line. Both systems were located under a feed hopper with start and stop controlled in automatic mode by the feed hopper and silo reception level probes. The systems are working very reliably with no line blockages and exceed customer's expectations regarding transfer rate providing 40t/h for fish food pellets and over 50t/h for the smaller pellets. Material degradation was a key concern with a requirement of 0.6% maximum degradation. The systems easily achieved their objectives with an average material transfer velocity of between 2.5m/s and 2.8m/s. The pipe line conveying pressure was between 0.8 and 0.92 Bar. These particular systems incorporated multiple manifold settings allowing transfer of a wide range of products materials and sizes.

### **MATERIAL CHARACTERISTICS**

Fish Food Pellets	3mm to 12mm
Bulk Density	650 Kg/m <sup>3</sup>
Temperature	15°C
Moisture Content	8.0%
Condition	Free Flowing

### **SYSTEM OBJECTIVES**

1. Minimal material degradation
2. Low conveying pressure
3. Reliable operation

### **SYSTEM PERFORMANCE**

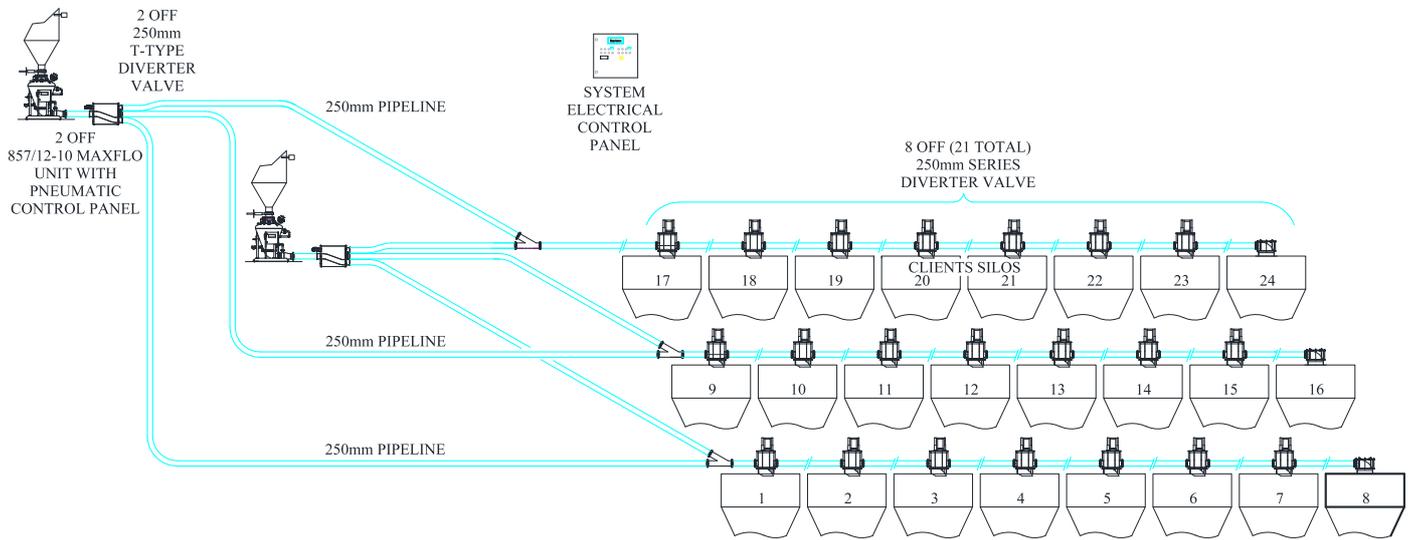
Transfer Capacity	35 t/hr
Conveying Distance	108m
Reception Points	1 feed and 24 reception points per system.

### **IMPROVEMENTS ACHIEVED**

1. Lower than specified degradation providing significant process savings
2. Increased transfer rate
3. Reduced compressed air requirements



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System Flow Layout