



## **MATERIAL HANDLING SOLUTIONS FOR THE GRAIN INDUSTRY**

Dust control in grain facilities can present challenges to material handling operations, but Torit® PowerCore® CPV bin vent collectors help ensure optimized material handling by providing effective and efficient filtration. To optimize throughput while maintaining effective dust collection performance, proactive collaboration is needed between the elevator operator, the general contractor, and the dust collector manufacturer. Elevator operators who proactively and thoughtfully design point-of-use dust collection typically realize the following benefits:

### **Faster Material Transfer**

The Torit® PowerCore® CPV collector effectively captures dust while avoiding whole grain being pulled from material transfer points. Operators do not have to constantly adjust damper positions to maintain the material handling system's effectiveness even at full dumping rates. With the use of optional items, such as a variable frequency drive and downtime filter cleaning, the limit on the receiving rate will be based solely on the conveying equipment - not on the ability to control dust. The result is increased throughput from the elevator.

### **Smaller Collectors**

Torit® PowerCore® CPV bin vent collectors are almost 70% shorter than other bag-style bin vents and effectively address the frequent challenge of tight space limitations.

### **Easier Maintenance**

Clean-side filter access and fewer, lighter filter packs means faster, easier filter changes without tools, filter cages or confined space entry.

### **Less Equipment**

Torit® PowerCore® CPV collectors in point-of-use dust collection eliminate dirty-air ducting, balancing gates, airlocks, filter hoppers, screw conveyors and pneumatic conveying equipment otherwise needed to move collected dust to storage bins. Effective point-of-use dust collection will reduce the installation and maintenance costs of your dust control.

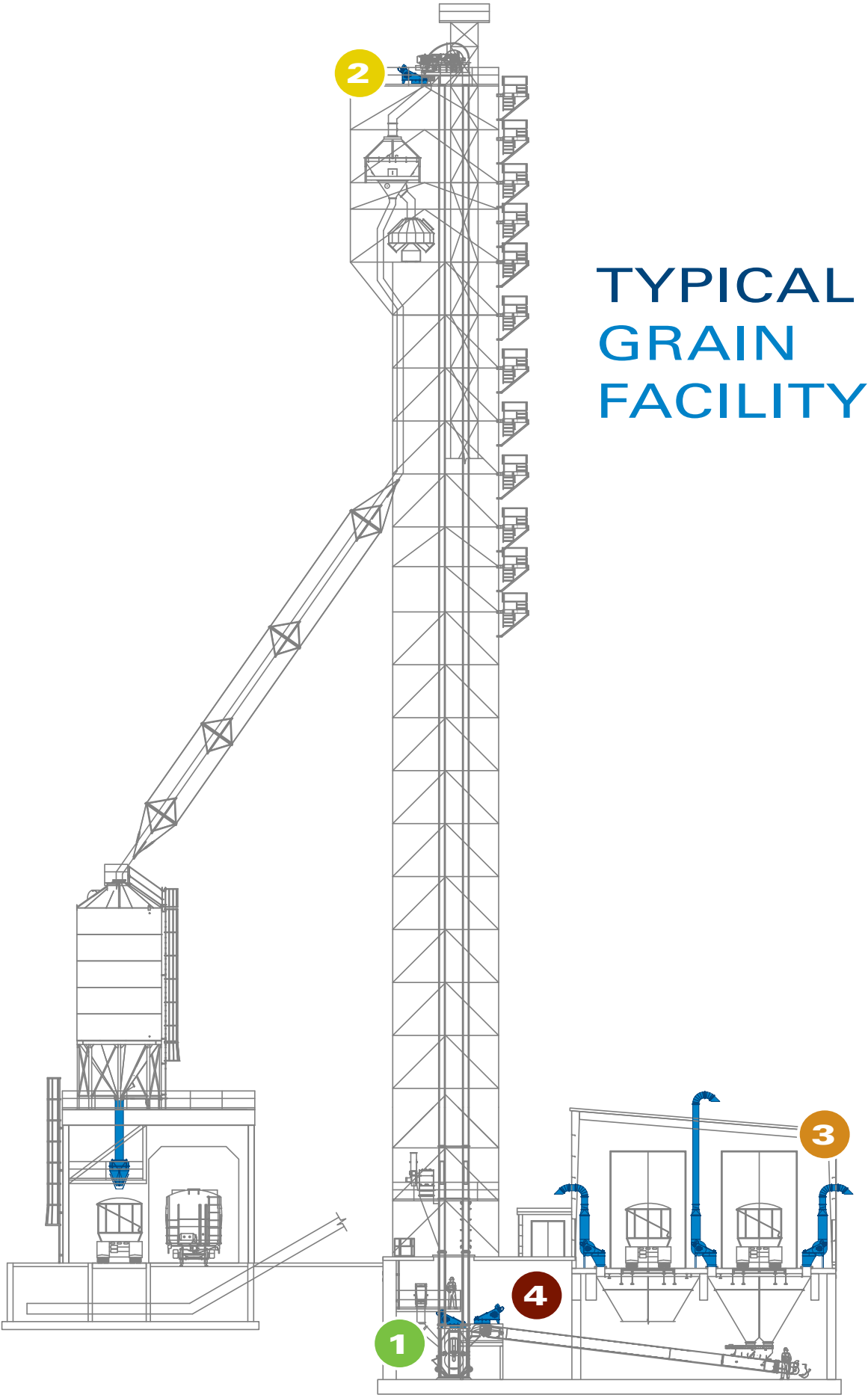
### **Lower Energy Consumption**

An optimized pulse system delivers effective cleaning while minimizing restriction through the collector for filtered air. As a result, Torit® PowerCore® CPV collectors require up to 40% less horsepower to operate compared to traditional bag-style collectors. The resulting energy savings alone may actually pay for the integrated system over the life of the equipment.

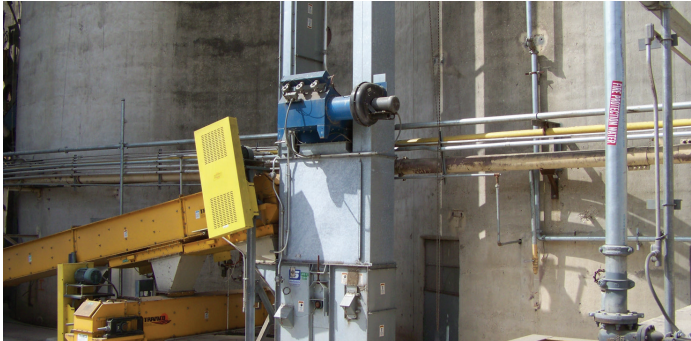
### **Cost Effective**

PowerCore® filtration technology means reduced freight and installation costs, fewer filter changeouts, lower maintenance costs, and reduced emissions and, therefore, reduced housekeeping costs.





## BUCKET ELEVATOR



Installed on the boot section **1** and discharge point **2** of the elevator, PowerCore® CPV eliminates the need for costly ducting.

## DUMP PIT



For new or replacement dump pits, **3** PowerCore® CPV collectors require smaller, quieter fans that reduce noise exposure and lower costs.

## CONVEYOR BELT



Placed at transition points or at the head and tail section of enclosed conveyors, **4** PowerCore® CPV collectors avoid the need for costly ducts as well as the need for material handling equipment to move collected dust to storage.

## OTHER APPLICATIONS

Silos, trippers, distributors, turnheads, hoppers, garners, cleaners, and scalpers can also be fitted with Torit® PowerCore® CPV point-of-use collectors to reduce costs and improve filtration efficiency.

# COST COMPARISON EXAMPLE

Traditional Baghouse vs. PowerCore® CPV Bin Vent Collector - Dump pit 10' X 10' area (10,000 CFM)

	<ul style="list-style-type: none"> <li>• 10,000 CFM, 12" SP</li> <li>• 124-8' bag collector with a 40 HP motor (8:1 air-to-cloth ratio)</li> <li>• Assuming 10 days installation time</li> <li>• Assuming 200' of ducts</li> </ul>	<ul style="list-style-type: none"> <li>• 10,000 CFM, 6" SP</li> <li>• Torit® PowerCore® CPV 24 with Torit Backward Inclined 30 HP motor (about 400 CFM per filter pack)</li> <li>• Assuming 4 days installation time</li> <li>• No ducts</li> </ul>
	<b>TRADITIONAL BAGHOUSE COLLECTOR</b>	<b>POWERCORE® CPV BIN VENT COLLECTOR</b>
Traditional Baghouse Collector	\$42,000	N/A
PowerCore® CPV Collector	N/A	\$21,000
Fan	\$6,600	\$5,600
Ducts	\$4,400	N/A
Installation Time	10 days	4 days
Shipping Cost	\$2,600	\$2,200
Energy/Operational Costs (24/7)	\$43,000	\$32,300
Maintenance/Down-time	More staff hours	Significantly fewer staff hours
<b>TOTAL *</b>	<b>\$98,600</b>	<b>\$61,100</b>

\* All costs are estimates. Please contact Donaldson Torit for specific pricing.

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