

Unlock the Potential of Your Filling Line

A recent FDA approval means you now have a choice in glass packaging.

CORNING

1. CHALLENGES WITH CONVENTIONAL VIALS

Observation of filling lines shows many manufacturing issues are due to limitations of conventional glass containers which lead to **lower quality** and **operational inefficiencies**

Cracks, scratches and glass particulates lead to quality issues



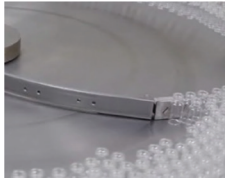
Rejects

Damage prone surface leads to weakening and breakage



Interventions

High coefficient of friction (CoF) leads to "sticky" behavior



Reduced Flow

2. INNOVATIVE SOLUTION: VALOR® GLASS

Valor glass is a revolutionary product enabled by process innovations that deliver **superior quality** and **cost reduction**



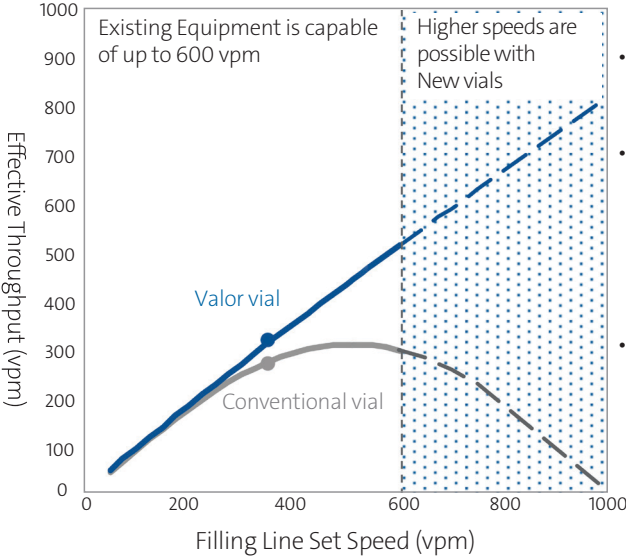
- Damage resistant external surface reduces particle generation by preventing scratches
- Engineered stress profile to actively prevent* cracks and increase load bearing strength
- Durable low CoF exterior surface coating that survives standard fill-finish operations

— Coated Region

*In laboratory testing, new vials provide at least 30x protection against cracks than conventional glass vials.

3. VALOR® VIALS INCREASES FILLING THROUGHPUT

Valor vial's high dimensional consistency and low coefficient of friction coating improves bulk **filling line efficiency** and **throughput**

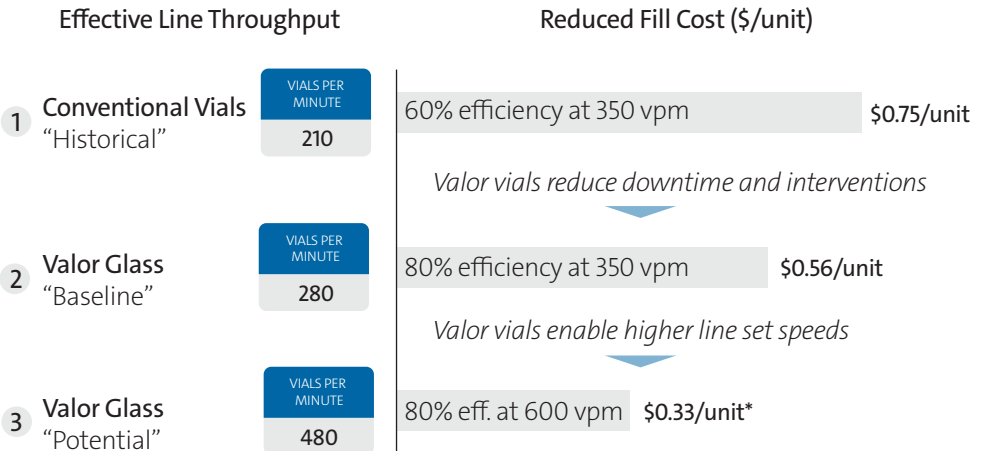


- Vial friction is a bottleneck when running conventional vials
- Conventional vials typically run at an efficiency of 50-70% which is an equivalent throughput of low to mid-200 vials per minute
- Observed “maximum effective speed” with conventional vials is approximately 270 ± 60 vials per minute

Valor vials can **maintain high efficiency (>80%)** at higher filling line set speeds

4. VALOR VIALS CAN LOWER MFG. FILLING COST

Valor vial's high dimensional consistency and low coefficient of friction coating improves **filling line efficiency** and **throughput**



*Equivalent to \$0.42/unit of value

The future of glass packaging is here.

Efficiency is critical in drug manufacturing. Breaks, interventions, and rejects decrease manufacturing productivity and hurt supply reliability.

Valor Glass has a low coefficient of friction exterior coating which significantly reduces production downtime, enables increased manufacturing productivity, and has the potential to create immediate capacity with existing assets.



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