The World's #1 Coker Valve Just Got Better

Now with Targeted Purging Technology

VELAN

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Velan has the largest installed-base of valves for delayed coking, trusted by users around the globe, and approved by all major licensors. To bring even more value to customers, Velan has made several innovative enhancements to our delayed coker valves improving purge design to minimize fouling and provide easier maintenance.

Industry-leading Design Features that Define Velan Coker Isolation Valves

Sturdy one-piece ball and stem

One-piece ball and stem design ensures absolute ball positioning and superior mechanical strength eliminating issues common to conventional two-piece designs, such as solids accumulation at the ball–stem interface and the risk of ball–stem joint separation.

Stem coupling protection

Stem coupling with built-in safety mechanism protects the stem from over-torquing, safeguards actuator components, and prevents unnecessary valve disassembly.

Steam purge system

Velan's original steam purge system design maintains continuous pressurization, with steam flow occurring only during valve cycling and through the bellows ID when the valve is open creating a concentrated steam burst during cycling, effectively flushing critical areas while minimizing steam consumption.

Lantern ring

A lantern ring with incorporated steam block and extra deep stuffing box minimizes the risk of leakage occurring through the packing chamber.

Unique scraper-type replaceable seat design

Hardfaced, scraper-type replaceable seats remove coke deposits from the ball surface during each cycle, ensuring long, trouble-free service life and allowing for quick and economical repairs.

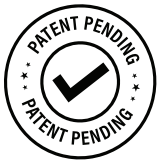
Strong bellows

Strong bellows offer a unique seat loading mechanism that maintains constant contact between the floating seats and the ball while ensuring a positive and reliable seal in both directions for coker cyclic applications, temperatures, and pressures.

Full-bore valves

Full-bore for maximum flow efficiency, delivering high Cv yet comparatively compact and lightweight.

New Features for Enhanced Reliability



1 NEW Tangential purging

Purge flow is now directed downward along surfaces where coke typically accumulates, dramatically improving cleaning efficiency of the ball and bellows compared to conventional perpendicular purge designs.

2 NEW Bottom body purge (optional)

An optional second body purge port is positioned nearly 180° from the primary port to create a looped steam flow around the ball, enhancing purge circulation and helping minimize coke deposition.

NEW Intermittent purge logic

An intermittent purging logic, ideal for low or medium coking service, activates the purge to enable intermittent purging of the bellows a few minutes before cycling.

3 NEW Integral flange purge

Integral flanges cast directly into the valve body reduce manufacturing, lead time, increase mechanical integrity, and improve overall repairability.

4 NEW Factory-installed piping manifold

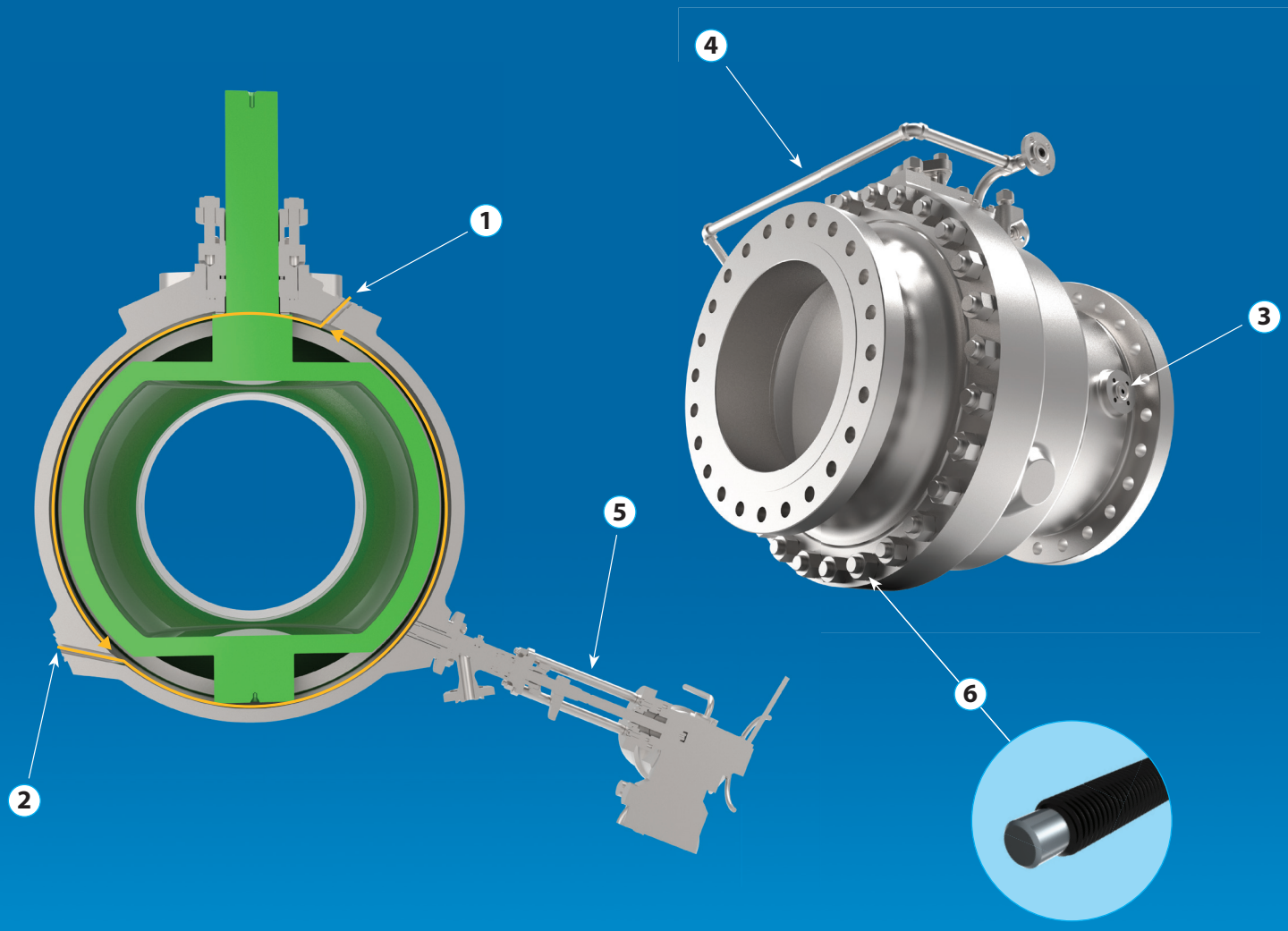
A factory-assembled purge manifold comes pre-installed to integrate seamlessly with existing connections and the optional bottom body purge, ensuring full compatibility with current installations.

5 NEW Zero-cavity piston drain valve (optional)

A drain valve is offered as an option for severe coking applications where fouling is a concern to enable a non-continuous drain to flush the cavity through a sequence of operations actuated and synchronized with the valve through Velan's programmable logic control (PLC) system.

6 NEW Improved stud design for easier refurbishment

A modification to the stud design in accordance with ASME PCC-2 guidelines simplifies removal of studs on flanges and bracket during valve maintenance by avoiding issues related to damaged threads such as the mushrooming effect.

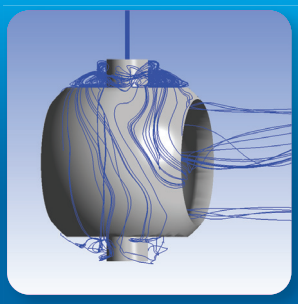


TARGETED PURGING TECHNOLOGY

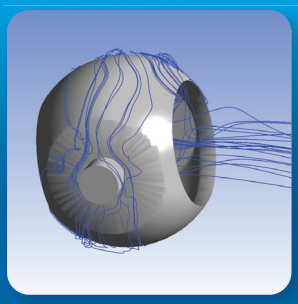
The newly added lower tangent purge is an anti-fouling design element that enables active purging to prevent debris from accumulating in stagnant cavities.

BEFORE

with original single top-body purge



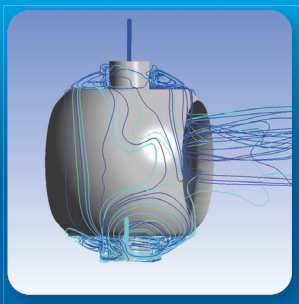
Front view



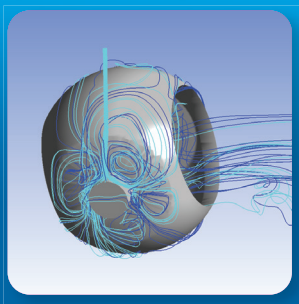
Bottom view

AFTER

with new 2nd tangential bottom-body purge

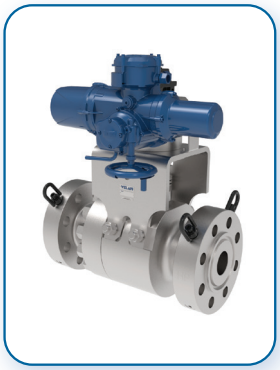


Front view



Bottom view

Valves for Delayed Coker



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Delayed Coker

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