

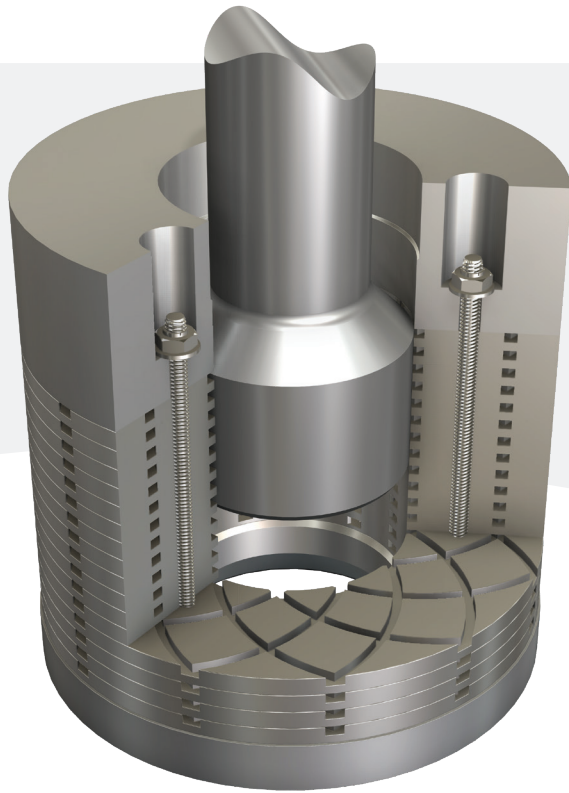


## **DiamondBack™ Trim**

Cavitation elimination technology  
for Valtek® Mark Series control valves



*Experience In Motion*



*With DiamondBack trim, control valve users get reliable cavitation prevention with higher rangeability, increased capacity and superior solids-handling capability.*

## DiamondBack trim: A revolution in cavitation elimination

DiamondBack trim is a revolution in control valve cavitation elimination with unequalled performance, efficiency and versatility. Its unique design succeeds where other cavitation elimination technologies have failed.

When installed in Valtek Mark Series control valves, DiamondBack trim's simple, yet bold cartridge design:

- Effectively eliminates high pressure drop cavitation and associated noise
- Passes solids up to 13 mm (0.5 in) without plugging
- Delivers up to 30% higher flow over the same pressure drop in a smaller and lighter package
- Is customizable for the most rigorous application requirements
- Is available in all commonly specified materials (e.g., 300 and 400 series stainless steels and high-nickel alloys) as well as exotic alloys and tungsten carbide

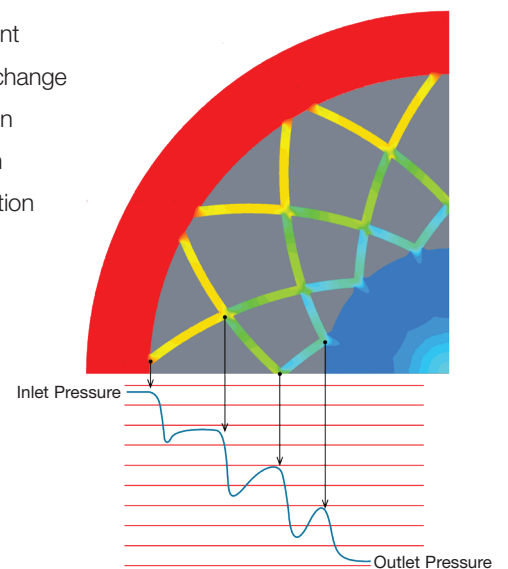
With DiamondBack trim, control valve users can now simultaneously solve two age-old problems — cavitation and erosion — with one product.

### Anti-cavitation mechanisms at work

DiamondBack trim employs all pressure drop mechanisms at the same time, efficiently absorbing and controlling pressure drop energy to eliminate the root causes of cavitation.

- Mutual impingement
- Sudden direction change
- Sudden contraction
- Sudden expansion
- Small passage friction
- Turbulent mixing

*In just four stages, 23 pressure-drop mechanisms are engaged.*



## Product data

**Base Valves:** Valtek Mark One™, Mark 100 and Mark 200

**Size Range:** 1 to 24 NPS (25 to 600 DN)

**Capacity Range:** 1.24 to 7,500 Cv (1.07 to 6,480 Kv)

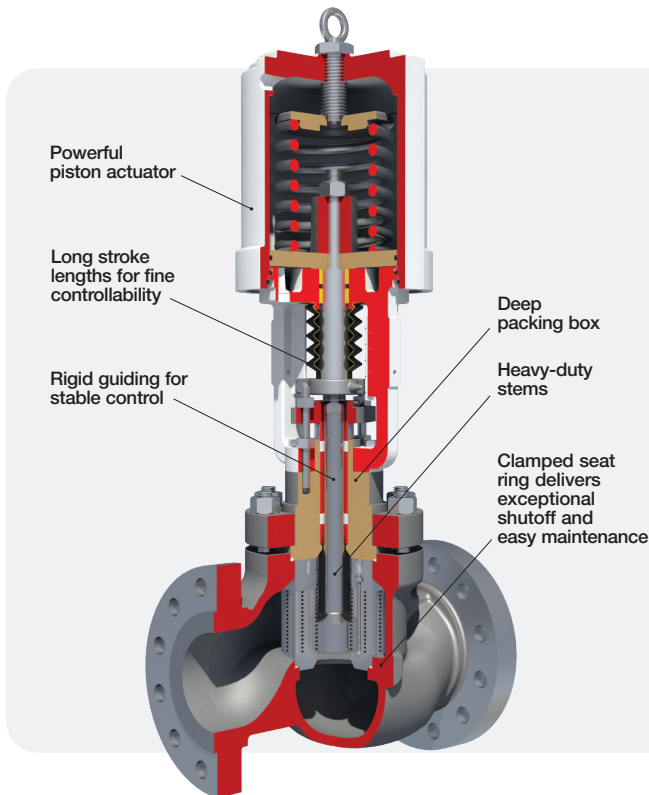
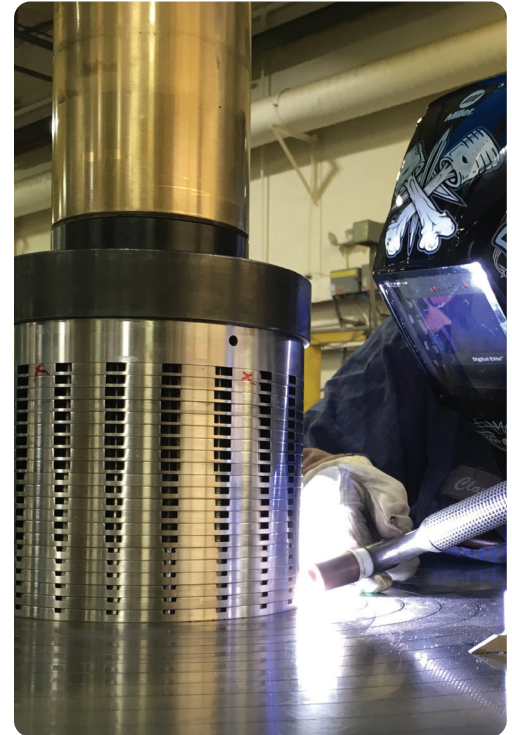
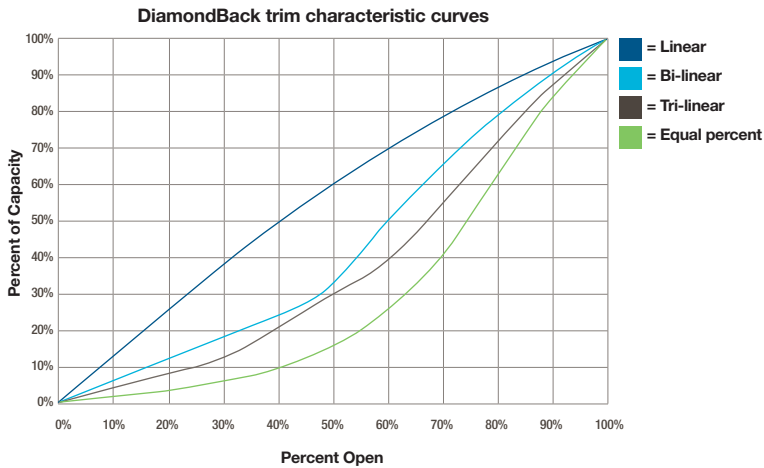
**Flow Direction:** Over the plug

**Trim Characteristic:** Linear, bi-linear, tri-linear or equal percent

**Pressure Stages:** 3 to 6

**Pressure Drop:** 500 to 5,000+ psi (34.5 to 349+ bar)

**Cavitation Protection (Sigma<sub>MR</sub>):** As low as 1.014



### DiamondBack trim plus Mark Series valves

- Maximum cavitation protection
- Maximum flow efficiency
- Maximum erosion protection
- Maximum total value

### Mark Series control valves

The Valtek Mark Series control valves are proven and preferred for:

- Extremely reliable, tight shutoff
- Fine control positioning accuracy and reliability
- High flow efficiency
- Robust and durable long-life design
- Quick and easy maintenance
- Proven reliable packing and gasket sealing



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