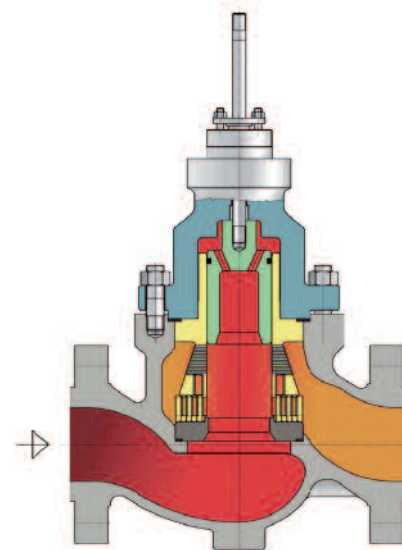


## RV631 series Control Valves

RV631 control valves have their main application in **boiler feedwater** process, They are expressly designed for processes that require low pressure drops when the flow rate is high and the need to avoid cavitation when flow rate is small. The special design of its cage, splitted in **3 steps** along the travel, allows the RV631 trim to meet these process requests. During the first travel section, in which high pressure drops might generate cavitation phenomena, the process is controlled by a properly designed multistep cage, which causes the fluid to pass through six pressure reduction stages: in this way any vaporization is avoided. The last section has a final single stage cage with large flow passages which ensures the maximum flow rate with moderate pressure drop. Each section of the cage, welded together to form a solid rugged unit, is separated by lips that prevent the fluid passage between adjacent sections.



RV631 Control Valve

### Technical characteristics:

#### Body:

- **Sizes:** 3", 4", 6", 8", 10", 12"
- **Ratings:** ANSI 150, 300, 600, 900, 1500
- **Flanged, BW, SW**
- Cast standard construction
- Face-to-face dimensions as per IEC 60534-3-2
- **Flow direction:** to open
- **Materials:** Carbon, Cr-Mo and stainless steels

#### Bonnet:

- Bolted to body
- Same material as body
- **Flow direction:** to open
- **Packing materials:** teflon or graphite seal rings
- **Materials:** Carbon, Cr-Mo and stainless steels

#### Trim:

- **Balanced** and fully **cage-guided** plug
- **Unbalanced design** for small ports or moderate pressure drop applications
- Plug seal rings: PTFE, metal or metal and graphite
- Flow characteristic: modified linear (see diagram)

#### Cage:

- Variable resistance along the travel: 6-stages for low openings, 3-stages for intermediate travel and single-stage at full opening.
- Different arrangements of stages distribution can be performed to fulfil special applications

#### Seat ring:

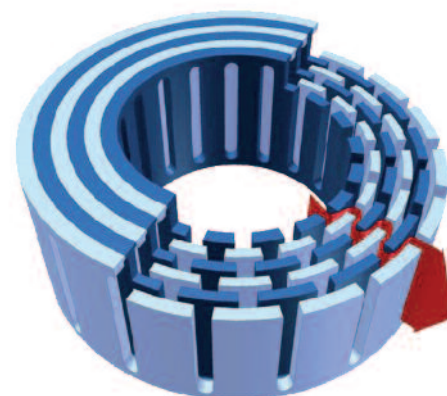
- Quick-change and free-expanding type, precisely coupled with the cage to ensure a perfect plug alignment

#### Leakage Class:

- Classes **IV**, **IV S1** and **V** according to IEC 60534-4

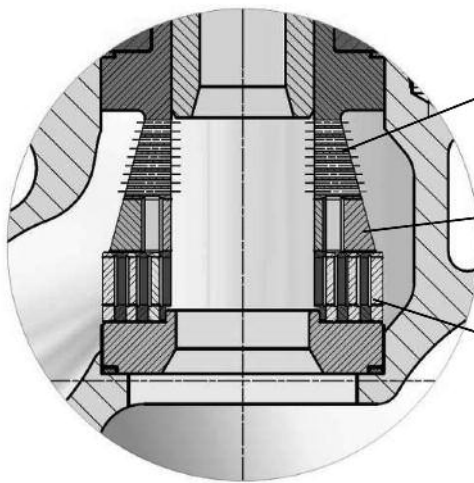
#### Actuators:

- **Pneumatic diaphragm** or **piston type**
- **Electric** and **electro-hydraulic** actuators



6-stage multistep cage detail

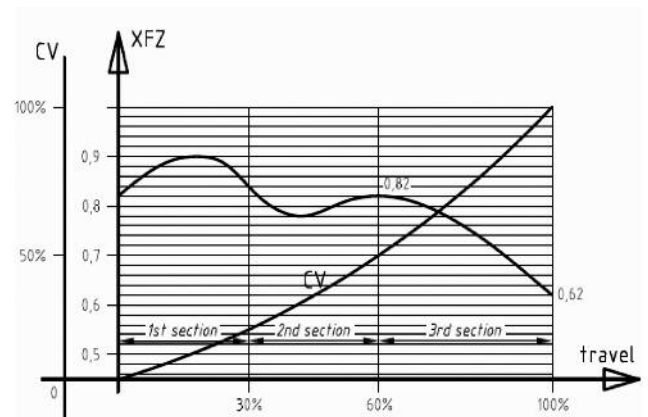
## RV631 3-step cage



*Last cage section with single-stage and high specific CV*

*Intermeditate section with 3-stage and increased specific CV*

*6-stage first anti-cavitation section*



*CV and  $X_{FZ}$  vs travel*

ITEM	PART NAME
1	BODY
2	BONNET
3	STEM
4	STUD
5	NUT
6	BODY GASKET
7	PIN
8	CAGE
9	PLUG
10	SEAT
11	SEAT GASKET
13	PACKING FLANGE
14	PACKING STUD
15	PACKING NUT
16	PACKING FOLLOWER
25	PACKING BOX
30+35	SEAL RING

