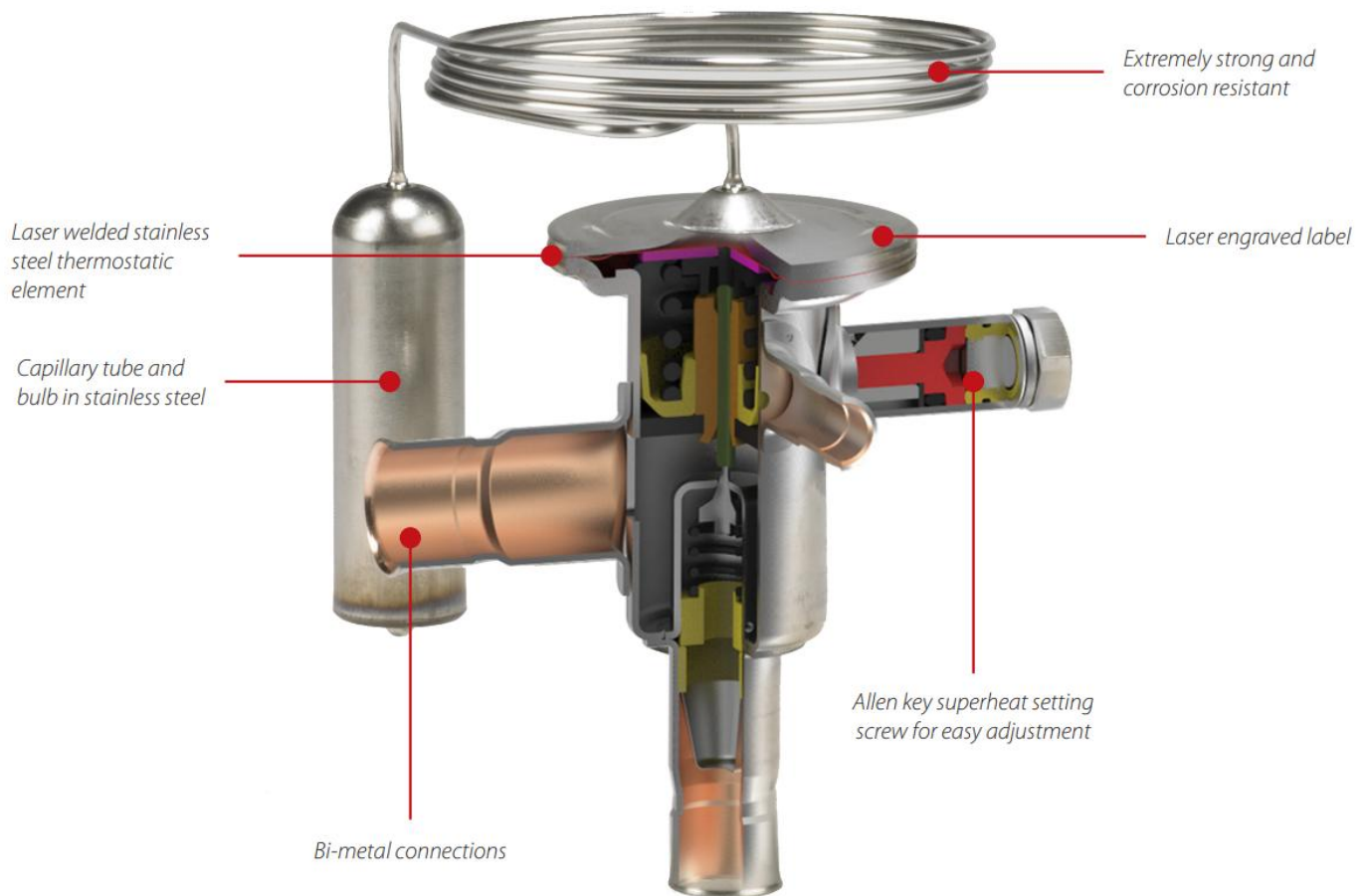


## VALVOLA DI ESPANSIONE PER GAS

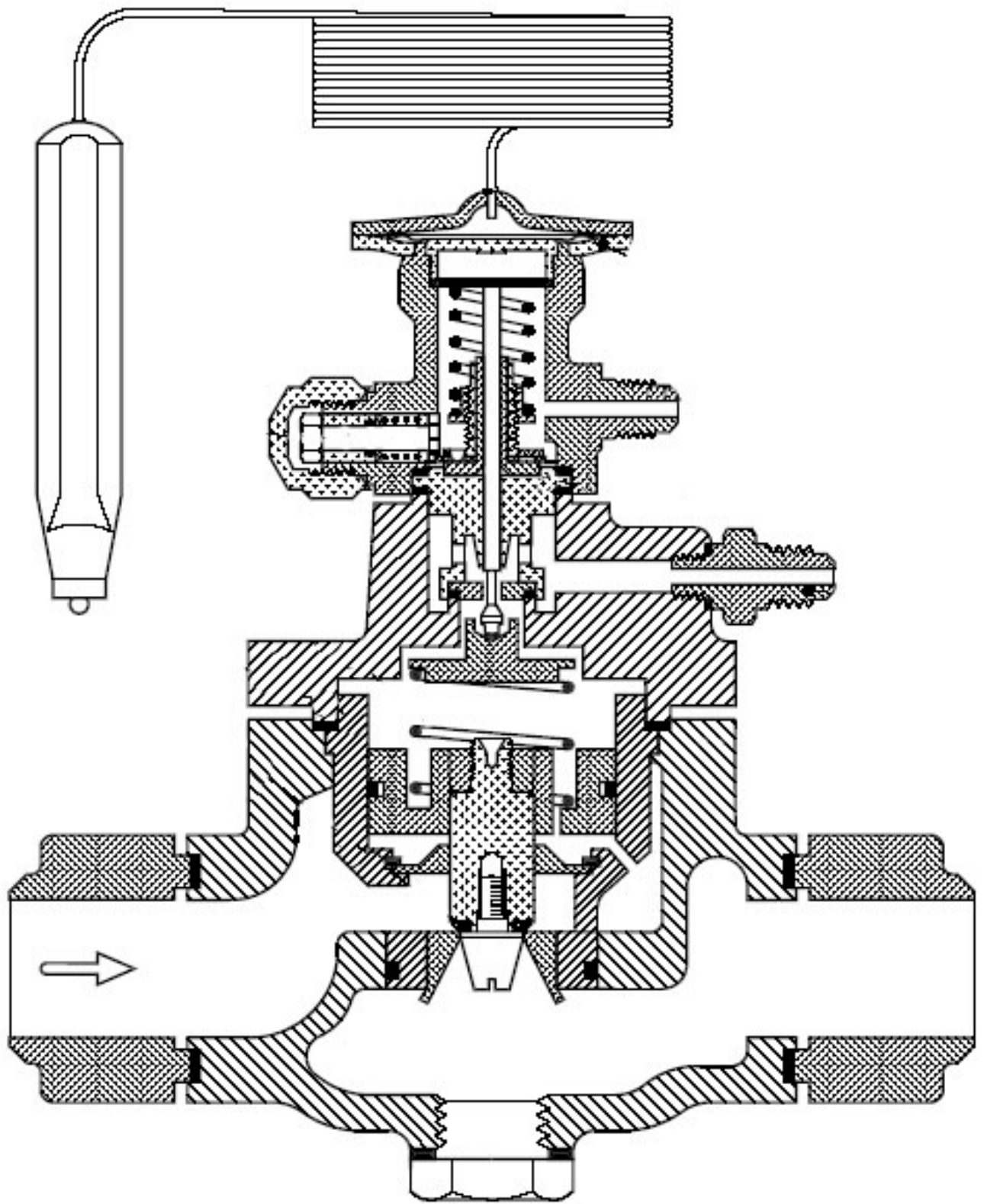
<https://theengineeringmindset.com/how-electronic-expansion-valves-work/>

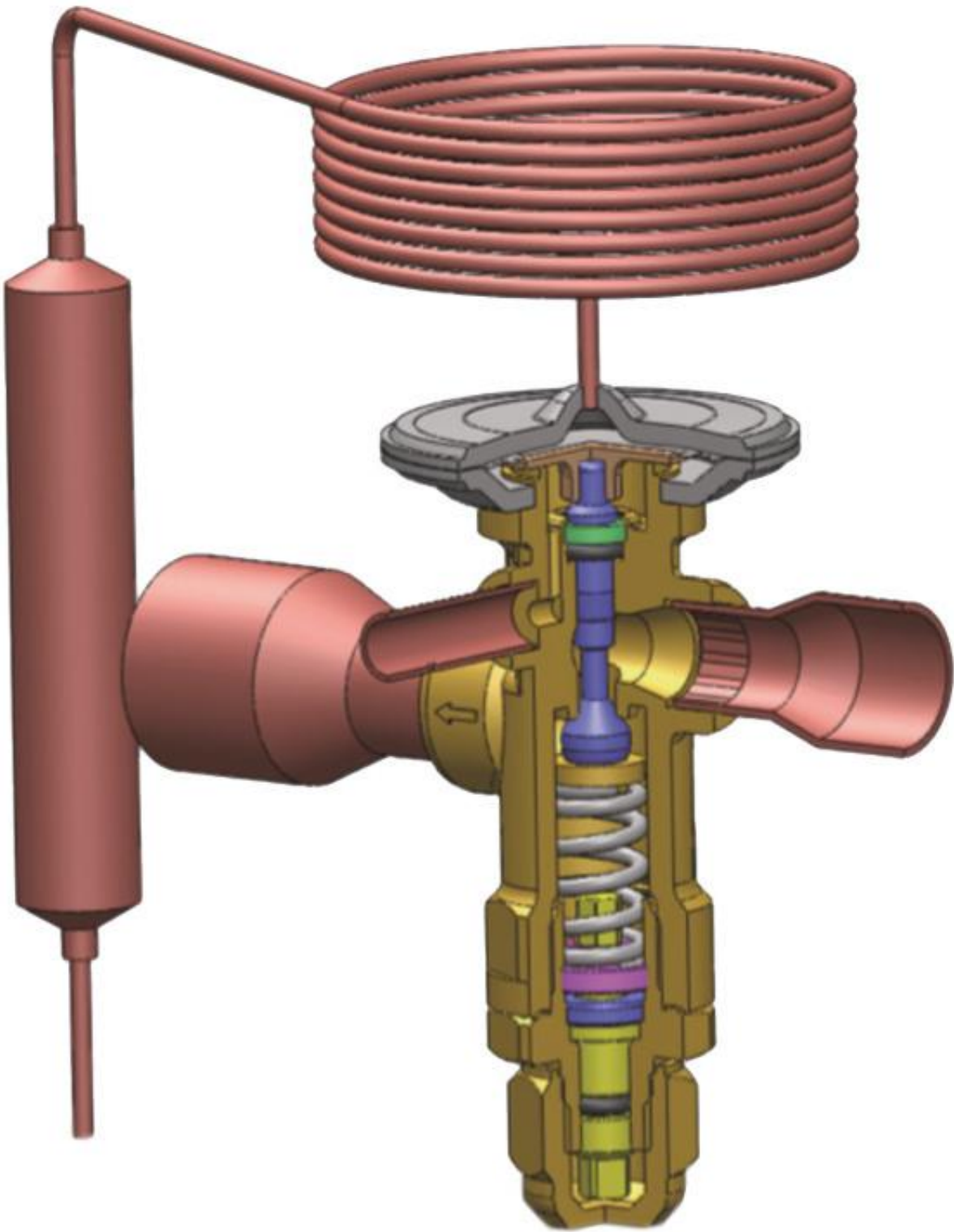
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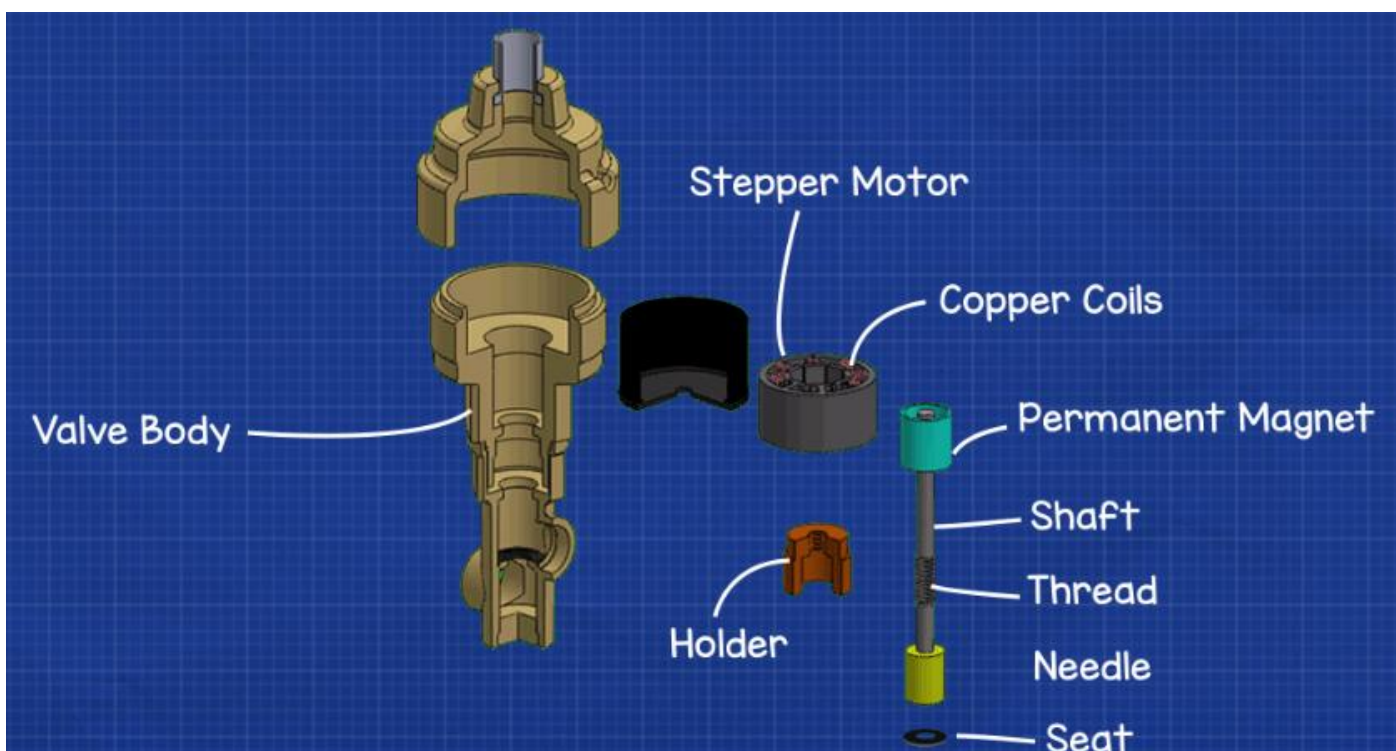
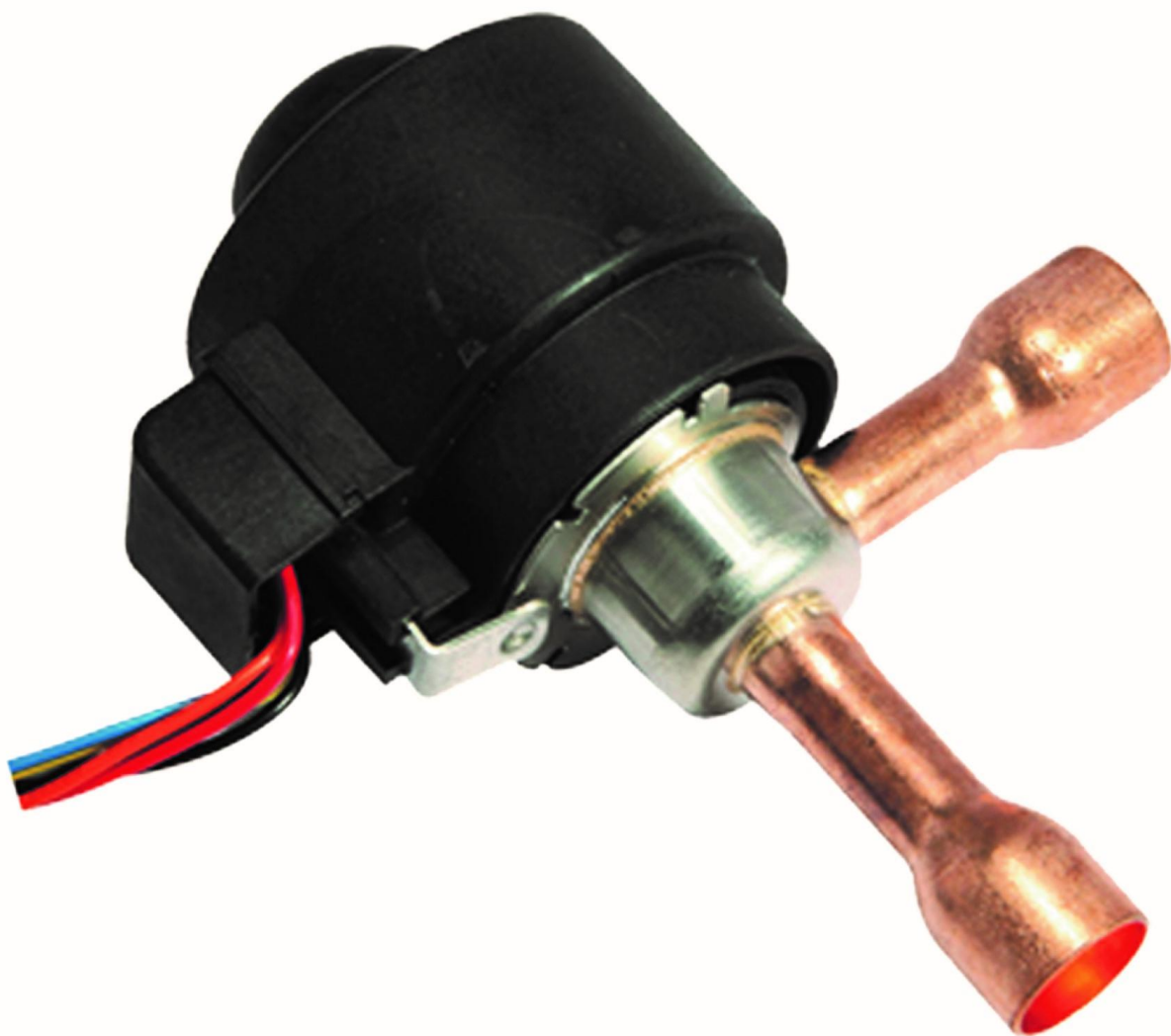
<https://www.youtube.com/watch?v=HqH1MSWakgo>



TUBE Thermostatic Expansion Valve



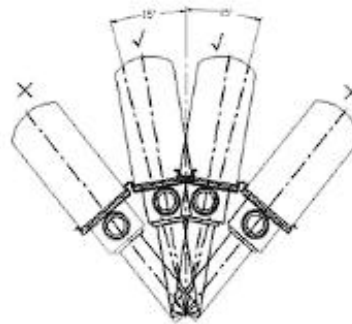
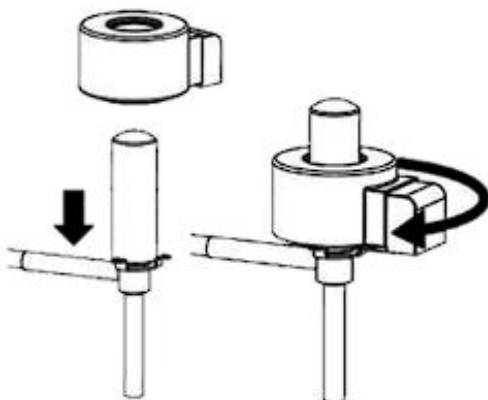
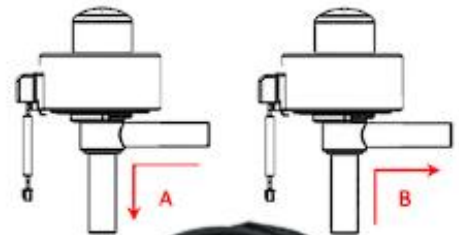
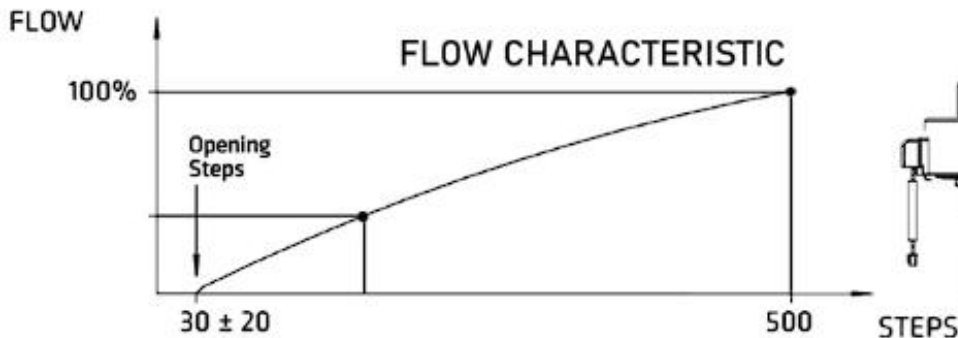
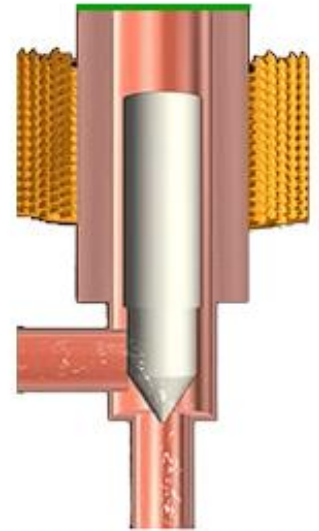






## General Specifications

- Applicable for all common HCFC & HFC refrigerants such as: R22, R134a, R404A, R407C, R410A, R507A.
- Cooling capacity: 3,5 to 105 kW (R22 nominal capacity)
- 500 steps (full stroke);  $32 \pm 20$  opening steps
- Medium temperature min./max.:  $-30^{\circ}\text{C} / +70^{\circ}\text{C}$  (duty cycle rate below 50%)
- Ambient temperature min./max.:  $-30^{\circ}\text{C} / +60^{\circ}\text{C}$  (duty cycle rate below 50%)
- Relative humidity: 0 to 95% RH
- Installation position:
  1. Coil installed in the upwards position, valve rotor central axis within  $\pm 15^{\circ}$  versus vertical axis
  2. Inlet connection preferably sidewise, outlet preferably downwards



## Electrical Parameters

- Rated voltage: 12V DC ( $\pm 10\%$ ), rectangular wave
- Actuating mode: 4-phase 8-step permanent magnet stepping motor of direct-acting type
- Excitation mode: 1 ~ 2 phase excitation, monopole actuation
- Excitation rate:
  - Seat Ø 1,3 to 3,2 mm: 30 to 90pps
  - Seat Ø 4,0 to 6,5 mm: 30 to 40pps
- Activation of self-holding mechanism: Maintain excitation in stop position min. 0,1~1,0 sec.
- Min. motion time from completely open to completely closed:
  - Seat Ø 1,3 to 3,2 mm: 6s @ 90pps
  - Seat Ø 4,0 to 6,5 mm: 13s @ 40pps
- Coil current:
  - Seat Ø 1,3 to 3,2 mm: 260mA/phase (20°C)
  - Seat Ø 4,0 to 6,5 mm: 375mA/phase (20°C)
- Coil resistance:
  - Seat Ø 1,3 to 3,2 mm:  $46 \pm 3.7 \Omega$ /phase (20°C)
  - Seat Ø 4,0 to 6,5 mm:  $32 \pm 3.2 \Omega$ /phase (20°C)
- Insulation class of coil: E
- Protection class: IP 66