

ENGINEERING  
TOMORROW

*Danfoss*

Revolutionary **ETS Colibri®** valves  
Engineered to give you maximum  
**flexibility** and **dependability**

ETS Colibri® brings to the market one of a kind, uniquely designed electric expansion valve.



**Innovative  
Design**

Compact, hermetic  
and in-line valve  
design driven by  
stepper motor  
technology.

**3x** Faster

ETS Colibri® can be driven fully closed in less than 4 seconds

**4x** Lighter

Thanks to its unique compact design.

## Re-engineered for the next level

ETS Colibri® is the most innovative and uniquely designed electric expansion valve in the market.

Danfoss has a proud heritage of over 30 years in designing and producing electric expansion valves. During this time, we've dedicated all our experience to perfecting our products – giving you the most reliable and innovative valves in the market.

Today, ETS Colibri® is a result of our dedication and passion for engineering, built around uncompromised quality and performance. Its focus on energy efficiency ensues from placing great attention to our customers' needs.



ETS 12C – ETS 24C



ETS 25C – ETS 50C – ETS 100C



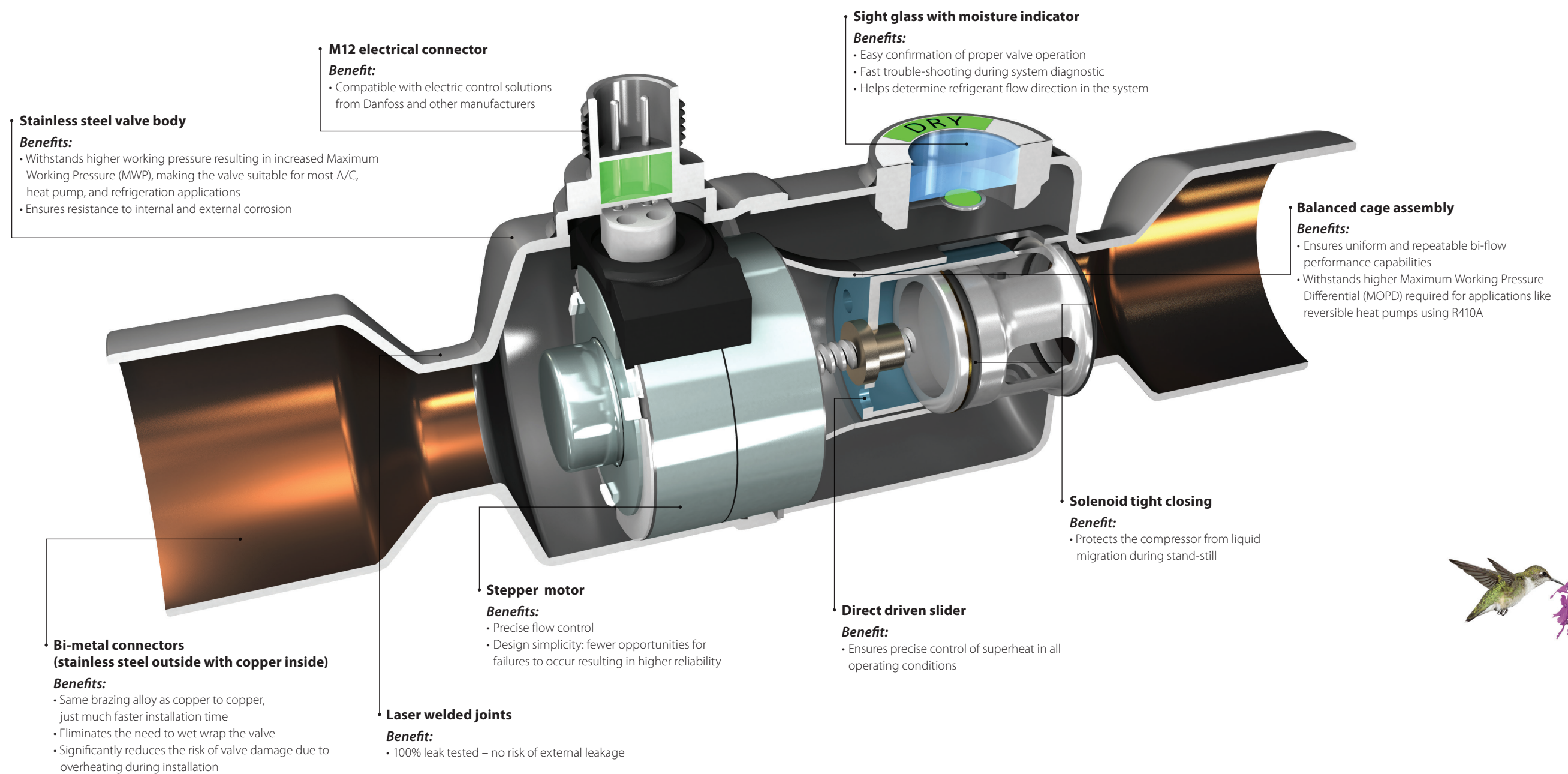
# Compact, hermetic and in-line design

**Compact design:** Easily fits anywhere in the system

**Lightweight body:** No extra support necessary in your system to avoid tubing cracks caused by vibration

**In-line design:** Flexibility to install the valve in almost any plane

**Hermetic:** Uncompromised integrity of internal components and fewer leak points in the system result in reduced refrigerant loss potential and fewer service calls



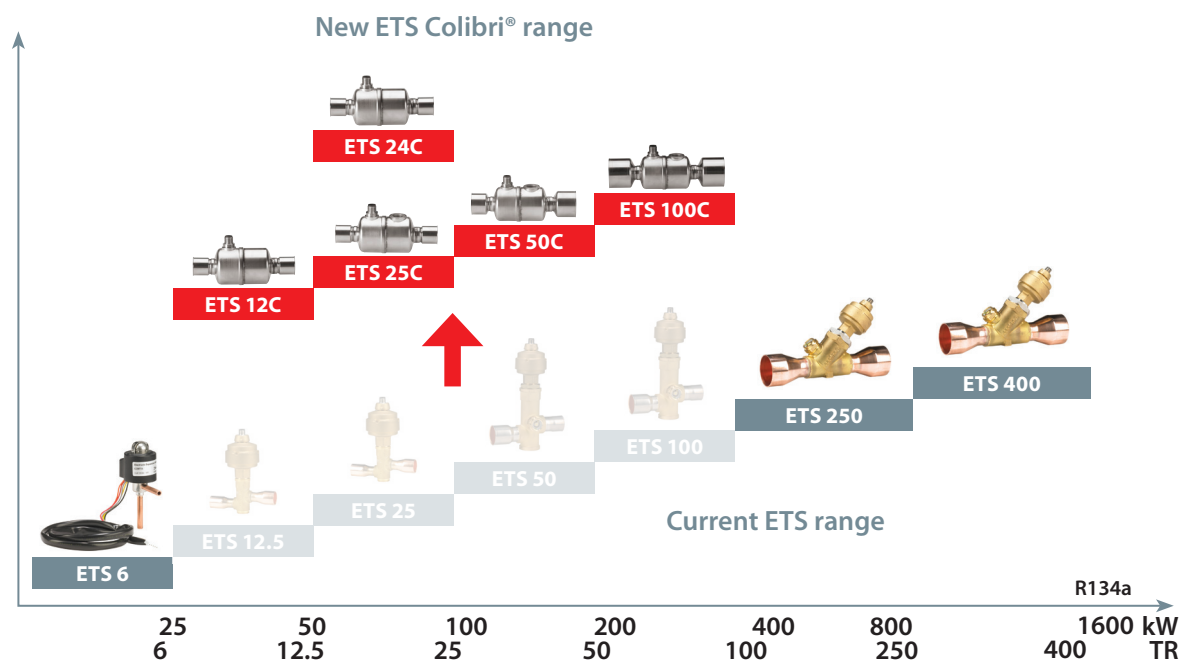
ETS Colibri® has been designed for precise liquid injection into evaporators for air-conditioning, heat pump and refrigeration applications. In addition, Colibri® valves are approved for oil-free operation, e.g. in systems with Danfoss Turbocor® oil-free compressors.

Thanks to its unique design, the Colibri® range can also be used as suction modulating valves in applications such as transportation and food retail.

The benefits of its linear opening and closing characteristics:

- Simpler control scheme allows for faster software development
- Faster reaction time at start-up leads to a low chance of starving the compressor

## Electric expansion valves range



## Technical data

<b>Compatible refrigerants</b>	R410A, R407C, R404A, R507, R134a, R290 (for other refrigerants, contact your Danfoss representative)
<b>Refrigerant temperature range</b>	-40 °C to 70 °C (-40 °F to 158 °F)
<b>MOPD</b>	40 bar (588 psi)
<b>Max. working pressure (PS/MWP)</b>	50 bar (735 psig)
<b>Stepper motor type</b>	Bi-polar - permanent magnet
<b>Step mode</b>	2 phase full step, micro-stepping (recommended)
<b>Max. total power</b>	7.2 W
<b>Step rate</b>	160 steps/sec. recommended (current control)
<b>Total steps</b>	600
<b>Full travel time</b>	3.75 sec. at recommended step rate

**50** bar  
working pressure ensures compatibility with all of the most widely used refrigerants.

ETS Colibri®.  
**Innovative** electric expansion  
valves for **best in class**  
air-conditioning, heat pump,  
and refrigeration systems.

Increased energy efficiency with uncompromised quality.

