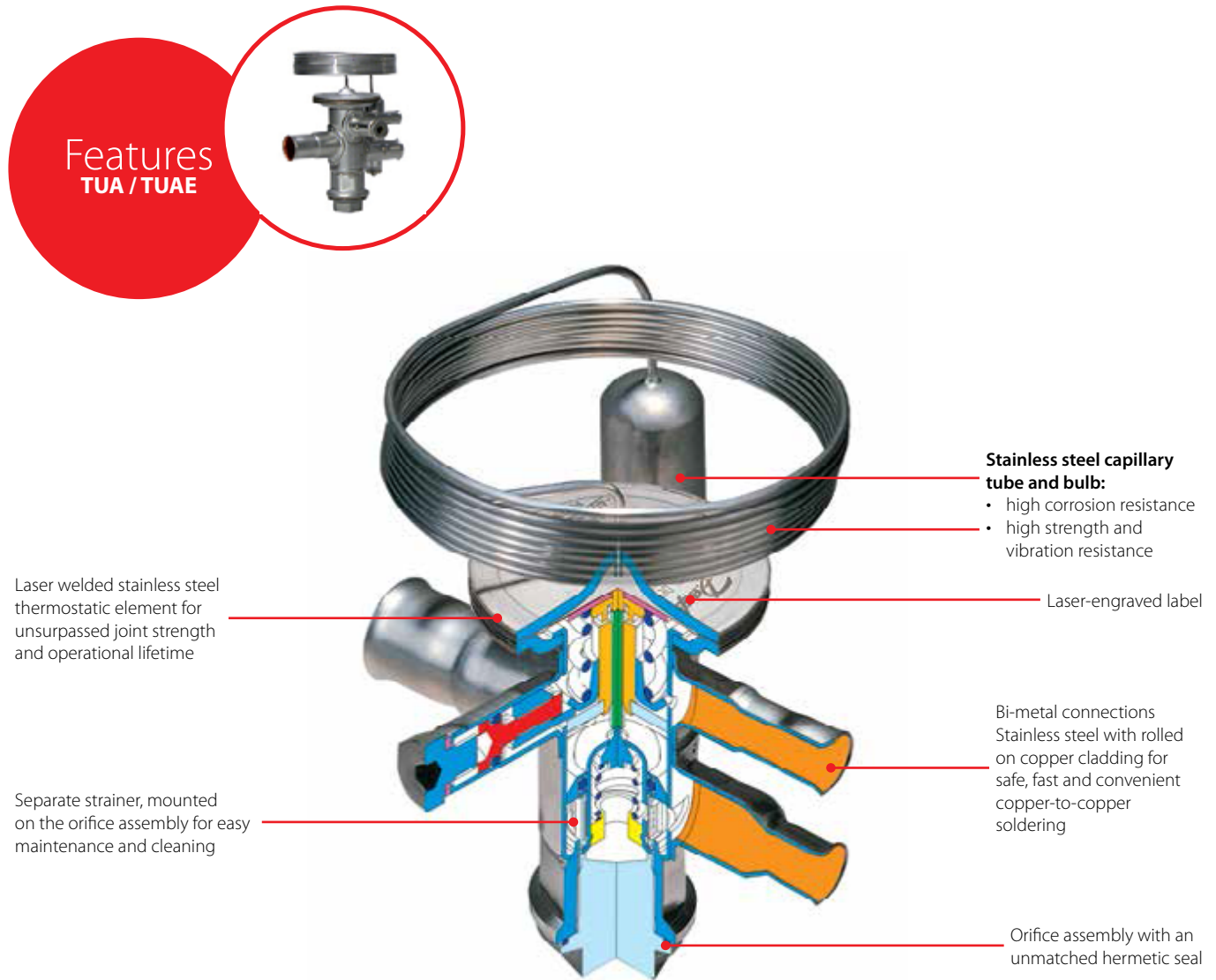


# TUA / TUAE, Thermostatic expansion valves

TUA / TUAE stainless steel thermostatic expansion valves are used for liquid injection into evaporators on both refrigeration and air conditioning systems using fluorinated refrigerants e.g. R134a, R404A, R407C, R22, R507 and R410A. TUA / TUAE valves are compact in design, light weight and have steel / copper bi-metal connections for fast soldering.

TUA / TUAE valves are supplied as parts programme, with separate thermostatic element / valve body, and orifice assembly. TUA has internal equalization, TUAE external equalization. TUA / TUAE are straightway valves, and have adjustable superheat setting.



## Facts

### Applications:

- Traditional refrigeration
- Heat pump systems
- Air conditioning units
- Liquid coolers
- Ice cube machines
- Transport refrigeration

### Maximum working temperature:

- -40 to 10 °C / -40 to 50 °F

### Refrigerants:

- R22/R407C
- R23
- R32
- R404A/R507
- R407C
- R407F
- R410A
- R508b
- R134a/R513A
- R407A
- R448A
- R449A

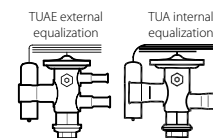
### Capacity range:

- 0.11 – 6.56 TR / 0.42 – 23.1 kW

### Benefit:

- The use of stainless steel makes the valves light and strong
- Bi-metal connections for safe, fast and convenient soldering
- Bi-flow function (TUAE: only orifice 1 – 8)

# Technical data and ordering



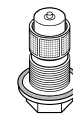
## TUA / TUAE

Thermostatic element, without orifice or strainer, with bulb strap

Refrigerant	Type	Pressure equalization	Capillary Tube (m)	Connections Inlet x outlet	Code no.		
					Range N		Range
					-40 to +10°C		-40 to
					in.	Without MOP	MOP +15°C
R22	TUA	Int.	1.5	3/8 x 1/2	068U2235	-	-
	TUAE	Ext.			068U2237	-	-
R134A/R513A	TUA	Int.			068U2205	-	-
	TUAE	Ext.			068U2207	-	-
R404/R507	TUA	Int.			068U2285	-	-
	TUAE	Ext.			068U2287	068U2295	068U2303
R407C	TUA	Int.			068U2325	-	-
	TUAE	Ext.			068U2327	-	-
R410A	TUAE	Ext. 1/4 in.			068U1714	-	-

## TUA / TUAE

Orifice assembly with filter and gasket



Valve type/ Orifice	R134A		R404A/R507		R407C		R22		R410A		Code no.
	MT	LT	MT	LT	MT	LT	MT	LT	MT	LT	
TU Orif. 0	0.35	0.16	0.41	0.19	0.56	0.34	0.56	0.35	0.91	0.58	068U1030
TU Orif. 1	0.52	0.2	0.61	0.24	0.8	0.49	0.83	0.52	1.21	0.78	068U1031
TU Orif. 2	0.6	0.3	0.72	0.35	0.93	0.55	0.97	0.59	1.48	0.89	068U1032
TU Orif. 3	0.8	0.46	0.94	0.53	1.23	0.75	1.28	0.8	1.9	1.2	068U1033
TU Orif. 4	1.32	0.73	1.61	0.86	2.069	1.22	2.16	1.28	3.4	1.95	068U1034
TU Orif. 5	1.77	0.99	2.16	1.15	2.77	1.6	2.89	1.72	4.54	2.61	068U1035
TU Orif. 6	2.75	1.54	3.37	1.79	4.3	2.49	4.5	2.68	7.12	4.05	068U1036
TU Orif. 7	3.63	2.03	4.45	2.36	5.68	3.29	5.95	3.53	9.39	5.34	068U1037
TU Orif. 8	5.38	3.01	6.52	3.4	8.34	4.83	8.73	5.2	13.56	7.84	068U1038
TU Orif. 9*	7.36	4.21	8.62	4.65	11.23	6.46	11.84	7	18.69	10.42	068U1039

Rated capacity at:

MT rated condition: Evaporating Temp. te = -5 °C, Condensing Temp. tc = +43 °C, superheat=8K, Subcooling=2K

LT rated condition: Evaporating Temp. te = -25 °C, Condensing Temp. tc = +43 °C, superheat=8K, Subcooling=2K

\*TUAE with orifice no. 9 can't be used for Biflow operation.

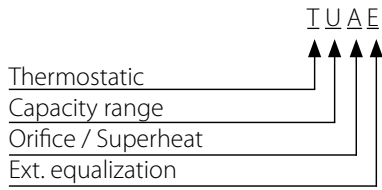
Out of the box, factory settings:

On systems charged with R134a; SSH = 5.0 °C (9.0 °F)

On systems charged with R513A; SSH = 6.1 °C (11 °F)

Note: For capacity of other refrigerant please refer datasheet of the valve or Coolselector.

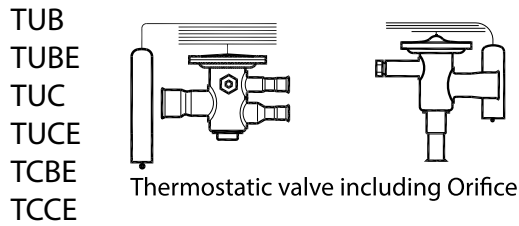
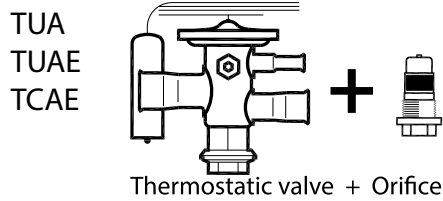
# Technical data



## Orifice / Superheat

	Interchangeable	Adjustable
<b>A</b>	YES	YES
<b>B</b>	NO	YES
<b>C</b>	NO	NO

*N* = -40 °C – 10 °C / -40 – 50 °F  
*NM* = -40 °C – -5 °C MOP 0 °C / -40 – 25 °F MOP 32 °F  
*NL* = -40 °C – -15 °C with MOP - 10 °C / -40 – 5 °F MOP 14 °F  
*B* = -60 °C – -25 °C / -75 – -15 °F



Valve types **TUB / TUBE / TUC / TUCE** and **TCBE / TCCE** can be replaced by **TUA / TUAE** and **TCAE** types