

# BQ Components Cross Reference

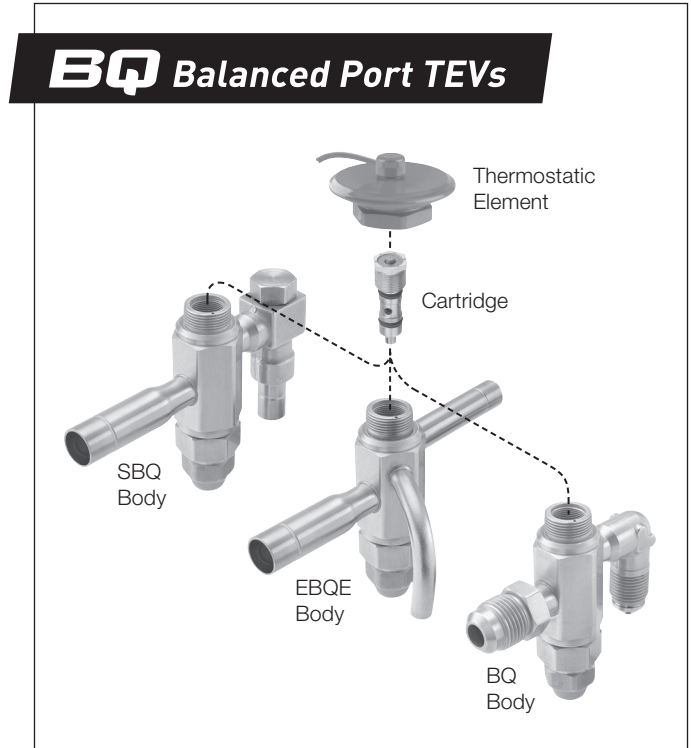
From Standard Sporlan Valves



The Sporlan Q Series Interchangeable Cartridge Style TEVs, both Conventional Port (Type Q) and **Balanced Port (Type BQ)**, are supplied in three individual component parts: the thermostatic element, the replaceable cartridge or orifice, and the valve body.

Use this bulletin to cross reference a standard Sporlan valve for replacement with a Sporlan **Balanced Port (Type BQ)** valve in four easy steps:

- 1. Identify the valve to be replaced.** The valve's body type, nominal capacity, and thermostatic charge can be determined by inspecting the valve. See the example below for a breakdown of a valve's description.
- 2. Select the cartridge required to handle the system load.** The nominal capacity of the valve to be replaced is marked in the brass body of the valve.
- 3. Choose the valve body.** Inspect the valve for replacement to determine the new valve body's fitting type, size, and orientation.
- 4. Verify the thermostatic charge.** The thermostatic charge will be marked on the thermostatic element on the top of the valve.



## STEP 1 - Identify Valve to be Replaced

### EXAMPLE - VALVE NOMENCLATURE






EG	V	E	1	C	3/8" ODF SOLDER	X	1/2" ODF SOLDER	X	1/4" ODF SOLDER	X	5'
Body Type	<b>Sporlan Code</b> – Refrigerant (Element Label Color Code) <b>F</b> = R-12 (Yellow) <b>E</b> = R-13 (Blue) <b>V</b> = R-22 (Green) <b>G</b> = R-23 (Blue) <b>M</b> = R-124 (Blue) <b>J</b> = R-134a (Blue) <b>X</b> = R-401A (Pink) <b>L</b> = R-402A (Sand) <b>S</b> = R-404A (Orange) <b>V</b> = R-407A (Green) <b>N</b> = R-407C (Lt. Brown) <b>N</b> = R-407F (Lt. Brown) <b>S</b> = R-408A (Purple) <b>F</b> = R-409A (Yellow) <b>Z</b> = R-410A (Rose) <b>V</b> = R-422D (Green) <b>D*</b> = R-448A (Blue) <b>D*</b> = R-449A (White) <b>R</b> = R-502 (Purple) <b>W</b> = R-503 (Blue) <b>P</b> = R-507A (Teal) <b>W</b> = R-508B (Blue) <b>J</b> = R-513A (White) <b>J</b> = R-1234yf (White)	"E" specifies external equalizer. Omission of letter "E" indicates valve with internal equalizer. e.g. EGV-1-C	Nominal Capacity in Tons	Thermostatic Charge	Inlet Connection Size and Style	Outlet Connection Size and Style	External Equalizer Connection Size and Style	Capillary Tubing Length Inches or Feet			

\* Sporlan no longer supports valves manufactured for R-500 that previously used the D refrigerant code.







# BQ Balanced Port TEVs

## STEP 2 - Cartridge Selection

SPORLAN VALVE BODY TYPE	NOMINAL CAPACITY (Stamped on Valve Body)				BQ VALVE CARTRIDGE			
	REFRIGERANT				PART NUMBER	SIZE	COLOR CODE	ITEM NUMBER
	R-134a R-1234yf R-513A R-401A R-409A R-12	R-22 R-407A R-407C R-407F	R-448A R-449A	R-404A R-502 R-507A R-402A				
<b>Type S</b> Use EBQ or EBQE Body 	—	2	2	—	BQC-B	B	Pink	168307
	2	3	2-1/2	2	BQC-C	C	White	168308
	2-1/2	4	3-1/2	3	BQC-C	C	White	168308
	3	5	5	—	BQC-C	C	White	168308
<b>Type EG</b> Use SBQ or SBQE Body 	—	1/5	1/5	—	BQC-AAA	AAA	Red	168303
	1/8	1/4	—	1/8	BQC-AAA	AAA	Red	168303
	1/6	1/3	1/4	1/6	BQC-AAA	AAA	Red	168303
	—	1/2	1/3	—	BQC-AA	AA	Yellow	168304
	1/4	3/4	1/2	1/4	BQC-AA	AA	Yellow	168304
	1/2	1	1	1/2	BQC-A	A	Blue	168306
	1	1-1/2	—	1	BQC-A	A	Blue	168306
	1-1/2	2-1/2	1-1/2	1-1/2	BQC-B	B	Pink	168307
2	3	2-1/2	2	BQC-C	C	White	168308	
<b>Type F</b> Use BQ or BQE Body 	—	1/5	1/5	—	BQC-AAA	AAA	Red	168303
	1/8	1/4	—	1/8	BQC-AAA	AAA	Red	168303
	1/6	1/3	1/4	1/6	BQC-AAA	AAA	Red	168303
	1/4	1/2	1/3	1/4	BQC-AA	AA	Yellow	168304
	1/2	1	3/4	1/2	BQC-A	A	Blue	168306
	1	1-1/2	1	1	BQC-A	A	Blue	168306
	1-1/2	2	—	1-1/2	BQC-B	B	Pink	168307
	—	2-1/2	2	—	BQC-B	B	Pink	168307
	2	3	2-1/2	2	BQC-C	C	White	168308
	3	5	5	3	BQC-C	C	White	168308
<b>Type EF</b> Use EBQ or EBQE Body 	—	1/5	1/5	—	BQC-AAA	AAA	Red	168303
	1/8	1/4	—	1/8	BQC-AAA	AAA	Red	168303
	1/6	1/3	1/4	1/6	BQC-AAA	AAA	Red	168303
	1/4	1/2	1/3	1/4	BQC-AA	AA	Yellow	168304
	1/2	1	3/4	1/2	BQC-A	A	Blue	168306
	1	1-1/2	1	1	BQC-A	A	Blue	168306
	1-1/2	2	—	1-1/2	BQC-B	B	Pink	168307
	—	2-1/2	2	—	BQC-B	B	Pink	168307
	2	3	2-1/2	2	BQC-C	C	White	168308
	3	5	5	3	BQC-C	C	White	168308
<b>Type C</b> Use BQ or BQE Body 	2	3	3-1/2	2	BQC-C	C	White	168308
	2-1/2	4	3-1/2	3	BQC-C	C	White	168308
	3	5	5	—	BQC-C	C	White	168308

# BQ Balanced Port TEVs

## STEP 2 - Cartridge Selection

SPORLAN VALVE BODY TYPE	NOMINAL CAPACITY (Stamped on Valve Body)				BQ VALVE CARTRIDGE			
	REFRIGERANT				PART NUMBER	SIZE	COLOR CODE	ITEM NUMBER
	R-134a R-1234yf R-513A R-401A R-409A R-12	R-22 R-407A R-407C R-407F	R-448A R-449A	R-404A R-502 R-507A R-402A				
<b>Type G</b> Use BQ or BQE Body  	—	1/5	1/5	—	BQC-AAA	AAA	Red	168303
	1/8	1/4	—	1/8	BQC-AAA	AAA	Red	168303
	1/6	1/3	1/4	1/6	BQC-AAA	AAA	Red	168303
	1/4	—	1/6	1/4	BQC-AA	AA	Yellow	168304
	—	1/2	1/3	—	BQC-AA	AA	Yellow	168304
	—	3/4	1/2	—	BQC-AA	AA	Yellow	168304
	1/2	1	1	1/2	BQC-A	A	Blue	168306
	1	1-1/2	—	1	BQC-A	A	Blue	168306
	1-1/2	2	1-1/2	1-1/2	BQC-A	A	Blue	168306
	—	2-1/2	—	—	BQC-B	B	Pink	168307
2	3	2-1/2	2	BQC-C	C	White	168308	
<b>Type ER</b> Use EBQ or EBQE Body  	1/6	1/3	1/3	1/6	BQC-AAA	AAA	Red	168303
	1/4	1/2	1/2	1/4	BQC-AA	AA	Yellow	168304
	1/3	3/4	3/4	1/3	BQC-AA	AA	Yellow	168304
	1/2	1	1	1/2	BQC-A	A	Blue	168306
	1	1-1/2	1-1/2	1	BQC-A	A	Blue	168306
	1-1/2	2	2	1-1/2	BQC-A	A	Blue	168306
	2	3	2-1/2	2	BQC-B	B	Pink	168307
	2-1/2	4	3-1/2	3	BQC-C	C	White	168308
	3	5	4	3-1/2	BQC-C	C	White	168308
	4*	6*	5*	4*				
5*	8*	6*	6*					
<b>Type SR</b> Use SBQ or SBQE Body  	1/6	1/3	1/3	1/6	BQC-AAA	AAA	Red	168303
	1/4	1/2	1/2	1/4	BQC-AA	AA	Yellow	168304
	1/3	3/4	3/4	1/3	BQC-AA	AA	Yellow	168304
	1/2	1	1	1/2	BQC-A	A	Blue	168306
	1	1-1/2	1-1/2	1	BQC-A	A	Blue	168306
	1-1/2	2	2	1-1/2	BQC-A	A	Blue	168306
	2	3	2-1/2	2	BQC-B	B	Pink	168307
	—	—	3-1/2	3	BQC-C	C	White	168308
	3	5	4	—	BQC-C	C	White	168308
<b>Type R</b> Use BQ or BQE Body  	1/6	1/3	1/3	1/6	BQC-AAA	AAA	Red	168303
	1/4	1/2	1/2	1/4	BQC-AA	AA	Yellow	168304
	1/3	3/4	3/4	1/3	BQC-AA	AA	Yellow	168304
	1/2	1	1	1/2	BQC-A	A	Blue	168306
	1	1-1/2	1-1/2	1	BQC-A	A	Blue	168306
	1-1/2	2	2	1-1/2	BQC-A	A	Blue	168306
	2	3	2-1/2	2	BQC-B	B	Pink	168307
	—	4	3-1/2	3	BQC-C	C	White	168308
	3	5	—	—	BQC-C	C	White	168308
	—	6*	—	—				

\*BQ Valve is not applicable for these valve sizes.

# BQ Balanced Port TEVs

## STEP 3 - Body Selection

The valve body type will be marked in the brass body of the valve. Inspect the valve for replacement to determine the new valve body's fitting type, size, and orientation.

BQ VALVE BODY		
VALVE TYPE	STANDARD CONNECTIONS Inches	ITEM NUMBER
	Inlet x Outlet	
<b>BQ</b> Internally Equalized 	1/4" x 3/8" SAE	168192
	1/4" x 1/2" SAE	168191
	3/8" x 1/2" SAE	168190
<b>BQE</b> Externally Equalized 	1/4" x 3/8" x 1/4" SAE	168185
	1/4" x 1/2" x 1/4" SAE	168184
	3/8" x 1/2" x 1/4" SAE	168183
<b>SBQ</b> Internally Equalized 	3/8" x 1/2" ODF	168193
<b>SBQE</b> Externally Equalized 	3/8" x 1/2" x 1/4" ODF	168198
<b>EBQ*</b> Internally Equalized 	1/4" x 3/8" ODF	168033
	1/4" x 1/2" ODF	168051
	3/8" x 1/2" ODF	168194
	3/8" x 5/8" ODF	168313
	1/2" x 5/8" ODF	168314
<b>EBQE*</b> Externally Equalized 	1/4" x 3/8" x 1/4" ODF	168035
	1/4" x 1/2" x 1/4" ODF	168051
	3/8" x 1/2" x 1/4" ODF	168186
	3/8" x 5/8" x 1/4" ODF	168189
	1/2" x 5/8" x 1/4" ODF	168187
	1/2" x 7/8" x 1/4" ODF	168188

\* The straight extended connections of the EBQ body series are designed for easy installation on air conditioning applications. The longer connections and resulting body configurations do not allow it to be packaged in the BQ Carrying Case. All EBQ and EBQE bodies are supplied with an inlet strainer; Item No. 908014, P/N 877-003 (3/8 ODF) or Item No. 908012, P/N 877-004 (1/2 ODF).

## STEP 4 - Thermostatic Charge Selection

Thermostatic element cap tube length is typically 30" or 60". OEM style valves may have different length cap tubes. When replacing these valves, the excess cap tube length can be coiled up and out of the way.

VALVE APPLICATION	THERMOSTATIC ELEMENT		
	ITEM DESCRIPTION	ITEM NUMBER	
		30"	60"
<b>R-134a, R-1234yf, R-513A, R-401A, R-409A, R-12</b>			
Air Conditioning	KT-43-JCP60	180206	180312
Commercial Refrigeration	KT-43-JC	180314	180310
<b>R-22, R-407A, R-407C, R-407F, R-448A, R-449A</b>			
Air Conditioning	KT-43-VCP100	180270	180272
	KT-43-NGA	180292	179957
Commercial Refrigeration	KT-43-VC	180269	180319
Low Temperature Refrigeration	KT-43-VZ	180273	180323
	KT-43-VZP40	180326	180324
<b>R-404A, R-502, R-507A, R-402A</b>			
Air Conditioning	KT-43-SCP115	180372	180360
Commercial Refrigeration	KT-43-SC/PC	183387	183388
	KT-43-SZ	180228	180318
Low Temp. Refrigeration	KT-43-SZP	180230	180060
<b>R-410A</b>			
Air Conditioning	KT-45-ZGA	181209	181212
	KT-45-ZCP180	181355	181213

### ⚠ WARNING – USER RESPONSIBILITY

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