

BQ Components Cross Reference

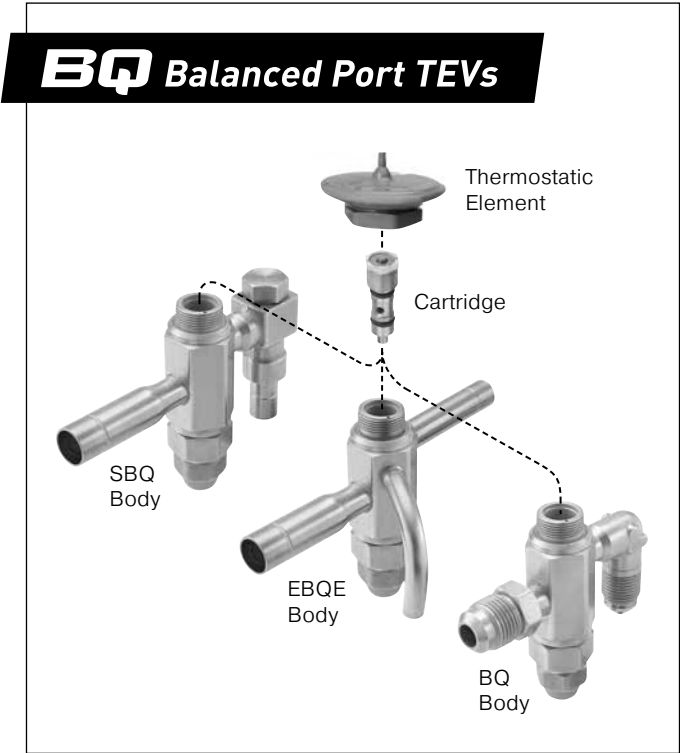
From Standard Sporlan Valves



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	J = R-1234yf R-134a R-401A R-409A R-513A S = R-402A R-404A R-502 R-507A V = R-22 R-454C R-455A	N = R-407A R-407C R-407F O = R-290 T = R-454A D = R-448A R-449A Z = R-32 R-410A Y = R-454B	"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	X	Outlet Connection Size and Style	X	External Equalizer Connection Size and Style	X	Capillary Tubing Length Inches or Feet

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



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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				
Type S 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
Type EG 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
Type F 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
Type EF 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
Type C 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				
Type G 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
Type ER 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*				
Type SR 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
Type R 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	
BQ Internally Equalized 	1/4" x 3/8" SAE	168192
	1/4" x 1/2" SAE	168191
	3/8" x 1/2" SAE	168190
BQE 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
SBQ Internally Equalized 	3/8" x 1/2" ODF	168193
SBQE Externally Equalized 	3/8" x 1/2" x 1/4" ODF	168198
EBQ* 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
EBQE* 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"
R-12, R-1234yf, R-134a, R-401A, R-409A, R-513A			
Air Conditioning	KT-47-JCP60	181521	181523
Commercial Refrigeration	KT-47-JC	181514	181531
R22, R-407A, R-407C, R-407F, R-448A, R-449A, R-454C, R-455A			
Air Conditioning	KT-47-VCP100	181549	181537
	KT-47-NGA	181551	181535
Commercial Refrigeration	KT-47-VC	181510	181511
Low Temperature Refrigeration	KT-47-VZ	181534	181529
	KT-47-VZP	181555	181538
R-402A, R-404A, R-502, R-507A			
Air Conditioning	KT-47-SCP115	---	181682
Commercial Refrigeration	KT-47-SC/PC	181530	181516
Low Temperature Refrigeration	KT-47-SZ	181512	181513
	KT-47-SZP	181533	181532
R-454A			
Commercial Refrigeration	KT-47-TC	181540	181541
Low Temperature Refrigeration	KT-47-TZ	181542	181543
	KT-47-TZP	181544	181545
R-32, R-410A			
Air Conditioning	KT-47-ZGA	181517	181518
	KT-47-ZCP180	---	181660
R-454B			
Air Conditioning	KT-47-YCP	181519	181664

⚠ WARNING - USER RESPONSIBILITY

Failure or improper selection or improper use of the products described herein or related items can cause death, personal injury and property damage.

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