

Thermostatic Expansion Valves



M Series - Miniature/Compact



Description

The Ranco® M Series Thermostatic Expansion Valves (TXV) are designed to meet the requirements of small refrigeration equipment. This TXV is used to adjust the refrigerant supply volume in the evaporator by sensing the superheat degree of the evaporator outlet through a thermal sensing bulb and external (internal) balance.

Features and Benefits

- 2 optional designs: adjustable superheat degree (straight-way style) and non-adjustable (right-angle style)
- Compact structure of valve body
- Power head uses continuous laser welding, providing a high welding strength and a long diaphragm life
- Available back pressure capability, 15% or 30%
- Available Maximum Operating Pressure (MOP) function
- Optional imported filter
- Standard capillary tube length: 30 in. (0.75 m)
- UL and CE Certified

Applications

- Commercial refrigeration
- Air conditioning
- Split systems
- Heat pump systems

1 Year
Limited
Warranty



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Specifications

Applicable refrigerants	R134A, R404A, R407C, R22, R290, R448A and R449A
Maximum working pressure	493 PSI (3.4 MPa)
Medium temperature range	-40°F to 158°F (-40°C to 70°C)
Ambient temperature range	-22°F to 131°F (-30°C to 55°C)
Maximum thermal bulb temperature	212°F (100°C)
Maximum valve body temperature	230°F (110°C)
Static state superheat degree adjustment change	0K to 8K
Static state superheat degree setting	4K
Relative humidity	95%

Replacement Information

Ranco Part Numbers	Danfoss (TD 1)	Sporlan (EG)	Sanhua (RFGB)	Nominal Capacity (tons)	Connections, ODF Solder (inch)			Capillary Tube Length (inch)	Refrigerants	Structure
					Inlet	Outlet	Equalizer			
					(inch)	(inch)	(inch)			
RTXVM-0.11A-1	068N5602	EGJ-1/8	RFGB04-0.12	0.11	1/4	3/8	NA	29.5	R-134A	Angleway (Internal equalization structure)
RTXVM-0.25A-1	068N5614	EGJ-1/4		0.25						
RTXVM-0.5A-1	068N5665	EGJ-1/2	RFGB04-0.44	0.5						
RTXVM-0.78A-1	068N5692		RFGB04-0.63	0.78						
RTXVM-0.9A-1				0.9						
RTXVM-1.3A-1	068N5695	EGJ-1	RFGB04-0.1.3	1.3	3/8	1/2	NA	29.5	R-407C	
RTXVM-1.9A-1		EGJ-1-1/2		1.9						
RTXVM-2.5A-1				2.5						
RTXVM-3A-1				3						
RTXVM-0.16A-3				0.16						
RTXVM-0.3A-3	068N5640	EGV-1/5	RFGB02-0.38	0.3	1/4	3/8	NA	29.5	R-407C	
RTXVM-0.8A-3		EGV-1/2		0.8						
RTXVM-1.1A-3	068N5685	EGV-1	RFGB02-1.1	1.1						
RTXVM-1.25A-3	068N5676			1.25						
RTXVM-1.6A-3		EGV-1-1/2	RFGB02-1.6	1.6						
RTXVM-2.5A-3		EGV-2-1/2	RFGB02-2.2	2.5	3/8	1/2	NA	29.5	R-22	
RTXVM-3.2A-3				3.2						
RTXVM-4.9A-3				4.9						
RTXVM-0.15A-2			RFGB01-0.17	0.15						
RTXVM-0.3A-2		EGV-1/5		0.3						
RTXVM-0.7A-2	068N5657	EGV-1/2	RFGB01-0.70	0.7	1/4	3/8	NA	29.5	R-22	
RTXVM-1A-2		EGV-1	RFGB01-1.0	1						
RTXVM-1.15A-2	068N5685			1.15						
RTXVM-1.5A-2		EGV-1-1/2	RFGB01-1.5	1.5						
RTXVM-2.3A-2				2.3						
RTXVM-3A-2		EGV-2-1/2		3	3/8	1/2	NA	29.5	R-404A / R-507	
RTXVM-4.5A-2				4.5						
RTXVM-0.11A-5	068N7603	EGS-1/8	RFGB03-0.13	0.11						
RTXVM-0.21A-5	068N5630	EGS-1/4	RFGB03-0.25	0.21						
RTXVM-0.45A-5	068N5620	EGS-1/2		0.45						
RTXVM-0.6A-5	068N5652		RFGB03-0.50	0.6	1/4	3/8	NA	29.5	R-404A / R-507	
RTXVM-0.8A-5			RFGB03-0.70	0.8						
RTXVM-1.2A-5		EGS-1	RFGB03-1.0	1.2						
RTXVM-1.7A-5		EGS-1-1/2	RFGB03-1.4	1.7						
RTXVM-2.2A-5				2.2						
RTXVM-2.6A-5				2.6	3/8	1/2	NA			

Ranco Part Numbers	Danfoss (TD 1)	Sporlan (EG)	Sanhua (RFGB)	Nominal Capacity (tons)	Connections, ODF Solder (inch)			Capillary Tube Length (inch)	Refrigerants	Structure			
					Inlet	Outlet	Equalizer						
					(inch)	(inch)	(inch)						
RTXVM-0.17A-8	068N5637		RFGB06-0.17	0.17	1/4	3/8	NA	29.5	R-290	Angleway (Internal equalization structure)			
RTXVM-0.32A-8	068N5603		RFGB06-0.35	0.32									
RTXVM-0.74A-8	068N5634		RFGB06-0.70	0.74									
RTXVM-1.1A-8	068N5662		RFGB06-1.0	1.1									
RTXVM-1.25A-8	068N5690			1.25									
RTXVM-1.6A-8			RFGB06-1.5	1.6	3/8	1/2	NA				29.5	R-290	Angleway (Internal equalization structure)
RTXVM-2.4A-8	068N5697			2.4									
RTXVM-3.2A-8				3.2									
RTXVM-4.7A-8				4.7									
RTXVM-0.11B-1	068N5703	EFJ-1/8	RFGB04-0.12	0.11	1/4	3/8	NA	29.5	R-134A				
RTXVM-0.25B-1	068N5710	EFJ-1/4		0.25									
RTXVM-0.5B-1		EFJ-1/2	RFGB04-0.44	0.5									
RTXVM-0.78B-1	068N5699		RFGB04-0.63	0.78									
RTXVM-0.9B-1	068N7661	EFJ-1		0.9									
RTXVM-1.3B-1		EFJ-1-1/2	RFGB04-0.1.3	1.3									
RTXVM-1.9B-1				1.9	3/8	1/2	NA				29.5	R-134A	
RTXVM-2.5B-1				2.5									
RTXVM-3B-1				3									
RTXVM-0.16B-3				0.16	1/4	3/8	NA	29.5	R-407C				
RTXVM-0.3B-3	068N7657		RFGB02-0.38	0.3									
RTXVM-0.8B-3				0.8									
RTXVM-1.1B-3			RFGB02-1.1	1.1									
RTXVM-1.25B-3				1.25									
RTXVM-1.6B-3			RFGB02-1.6	1.6									
RTXVM-2.5B-3			RFGB02-2.2	2.5	3/8	1/2	NA				29.5	R-407C	
RTXVM-3.2B-3				3.2									
RTXVM-4.9B-3				4.9									
RTXVM-0.15B-2				0.15	1/4	3/8	NA	29.5	R-22	Straightway (Internal equalization structure)			
RTXVM-0.3B-2		EFV-1/3	RFGB01-0.17	0.3									
RTXVM-0.7B-2			RFGB01-0.70	0.7									
RTXVM-1B-2		EFV-1	RFGB01-1.0	1									
RTXVM-1.15B-2				1.15									
RTXVM-1.5B-2		EFV-1-1/2	RFGB01-1.5	1.5									
RTXVM-2.3B-2		EFV-2-1/2		2.3	3/8	1/2	NA				29.5	R-22	Straightway (Internal equalization structure)
RTXVM-3B-2				3									
RTXVM-4.5B-2				4.5									
RTXVM-0.11B-5		EFS-1/8	RFGB03-0.13	0.11	1/4	3/8	NA	29.5	R-404A / R-507				
RTXVM-0.21B-5	068N7668	EFS-1/4	RFGB03-0.25	0.21									
RTXVM-0.45B-5	068N7669	EFS-1/2		0.45									
RTXVM-0.6B-5	068N7633		RFGB03-0.50	0.6									
RTXVM-0.8B-5			RFGB03-0.70	0.8									
RTXVM-1.2B-5		EFS-1	RFGB03-1.0	1.2									
RTXVM-1.7B-5		EFS-1-1/2	RFGB03-1.4	1.7	3/8	1/2	NA				29.5	R-404A / R-507	
RTXVM-2.2B-5				2.2									
RTXVM-2.6B-5				2.6									
RTXVM-0.17B-8	068N7643		RFGB06-0.17	0.17	1/4	3/8	NA	29.5	R-290				
RTXVM-0.32B-8	068N7656		RFGB06-0.35	0.32									
RTXVM-0.74B-8	068N7689		RFGB06-0.70	0.74									
RTXVM-1.1B-8			RFGB06-1.0	1.1									
RTXVM-1.25B-8				1.25									
RTXVM-1.6B-8			RFGB06-1.5	1.6									
RTXVM-2.4B-8				2.4	3/8	1/2	NA				29.5	R-290	
RTXVM-3.2B-8				3.2									
RTXVM-4.7B-8				4.7									

Ranco Part Numbers	Danfoss (TD 1)	Sporlan (EG)	Sanhua (RFGB)	Nominal Capacity (tons)	Connections, ODF Solder (inch)			Capillary Tube Length (inch)	Refrigerants	Structure
					Inlet	Outlet	Equalizer			
					(inch)	(inch)	(inch)			
RTXVM-0.11E-1	068N5703	EFJE-1/8	RFGB04(E)-0.12	0.11	1/4	3/8	1/4	29.5	R-134A	Straightway (External equalization structure)
RTXVM-0.25E-1	068N5710	EFJE-1/4		0.25						
RTXVM-0.5E-1		EFJE-1/2	RFGB04(E)-0.44	0.5						
RTXVM-0.78E-1	068N5699		RFGB04(E)-0.63	0.78						
RTXVM-0.9E-1	068N7661	EFJE-1		0.9						
RTXVM-1.3E-1		EFJE-1-1/2	RFGB04(E)-0.1.3	1.3	3/8	1/2				
RTXVM-1.9E-1		EFJE-2		1.9						
RTXVM-2.5E-1				2.5						
RTXVM-3E-1				3						
RTXVM-0.16E-3				0.16	1/4	3/8	1/4	29.5	R-407C	
RTXVM-0.3E-3	068N7657	EFVE-1/3	RFGB02(E)-0.38	0.3						
RTXVM-0.8E-3		EFVE-1/2		0.8						
RTXVM-1.1E-3		EFVE-1	RFGB02(E)-1.1	1.1						
RTXVM-1.25E-3				1.25						
RTXVM-1.6E-3		EFVE-1-1/2	RFGB02(E)-1.6	1.6	3/8	1/2				
RTXVM-2.5E-3			RFGB02(E)-2.2	2.5						
RTXVM-3.2E-3				3.2						
RTXVM-4.9E-3				4.9						
RTXVM-0.15E-2				0.15	1/4	3/8	1/4	29.5	R-22	
RTXVM-0.3E-2			RFGB01(E)-0.17	0.3						
RTXVM-0.7E-2		EFVE-1/2	RFGB01(E)-0.70	0.7						
RTXVM-1E-2		EFVE-1	RFGB01(E)-1.0	1						
RTXVM-1.15E-2				1.15						
RTXVM-1.5E-2		EFVE-1-1/2	RFGB01(E)-1.5	1.5	3/8	1/2				
RTXVM-2.3E-2		EFVE-2		2.3						
RTXVM-3E-2		EFVE-3		3						
RTXVM-4.5E-2				4.5						
RTXVM-0.11E-5		EFSE-1/8	RFGB03(E)-0.13	0.11	1/4	3/8	1/4	29.5	R-404A / R-507	
RTXVM-0.21E-5	068N7668	EFSE-1/4	RFGB03(E)-0.25	0.21						
RTXVM-0.45E-5	068N7669			0.45						
RTXVM-0.6E-5	068N7633	EFSE-1/2	RFGB03(E)-0.50	0.6						
RTXVM-0.8E-5			RFGB03(E)-0.70	0.8						
RTXVM-1.2E-5		EFSE-1	RFGB03(E)-1.0	1.2	3/8	1/2				
RTXVM-1.7E-5		EFSE-1-1/2	RFGB03(E)-1.4	1.7						
RTXVM-2.2E-5		EFSE-2		2.2						
RTXVM-2.6E-5				2.6	1/4	3/8	1/4	29.5	R-290	
RTXVM-0.17E-8	068N7643		RFGB06(E)-0.17	0.17						
RTXVM-0.32E-8	068N7656		RFGB06(E)-0.35	0.32						
RTXVM-0.74E-8	068N7689		RFGB06(E)-0.70	0.74						
RTXVM-1.1E-8			RFGB06(E)-1.0	1.1						
RTXVM-1.25E-8				1.25						
RTXVM-1.6E-8			RFGB06(E)-1.5	1.6						
RTXVM-2.4E-8				2.4	3/8	1/2				
RTXVM-3.2E-8				3.2						
RTXVM-4.7E-8				4.7						