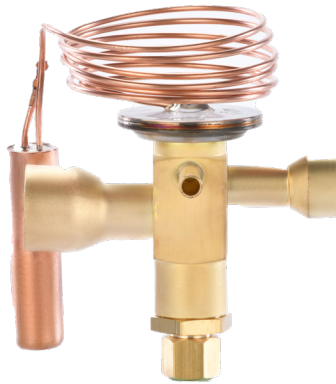


Thermostatic Expansion Valves



BD Series - Bidirectional



Description

The Ranco® BD Series Thermostatic Expansion Valves (TXV) are designed to meet the bidirectional requirements for heat pump systems. 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

- Adjustable superheat degree design
- Power head uses continuous laser welding, providing high welding strength and a long diaphragm life
- Available Maximum Operating Pressure (MOP) function
- Rare hysteresis and good adjustment performance
- Balanced port design for bidirectional throttling
- Standard capillary tube length: 60 in. (1.5 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	R410A, R22, R134A, R404A, R507, R290 and R407C
Maximum working pressure	667 PSI (4.6 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 (TGE)	Sporlan (S / EBS)	Sanhua (RFGD)	Nominal Capacity (tons)	Connections, ODF Solder (inch)			Capillary Tube Length (inch)	MOP (Thermostatic Charge)	Refrigerants
					Inlet	Outlet	Equalizer			
					(inch)	(inch)	(inch)			
RTXVBD-3.5-3			RFGD02E-3.1-33	3.1	3/8	5/8	1/4	60	NA	R-407C
RTXVBD-5-3	067N4152		RFGD02E-4.2-34	4.2	1/2	7/8				
RTXVBD-7-3			RFGD02E-6.3-35	6.3						
RTXVBD-8.5-3	067N4156		RFGD02E-8.1-36	8.1	5/8					
RTXVBD-10-3	067N4157		RFGD02E-9.4-37	9.4						
RTXVBD-12-3	067N4410		RFGD02E-11.7-38	11.7						
RTXVBD-12A-3			RFGD02E-12.0-542	12						
RTXVBD-12B-3			RFGD02E-12.0-543	12	1-1/8					
RTXVBD-15B-3			RFGD02E-15.0-545	15						
RTXVBD-15C-3	067N4162		RFGD02E-15.0-547	15		7/8				
RTXVBD-18B-3	067N4163		RFGD02E-18.0-549	18						
RTXVBD-18C-3			RFGD02E-18.0-551	18						
RTXVBD-12D-3			RFGD02E-12.0-637	12	5/8	1-1/8			95 psig (60°F)	
RTXVBD-12C-3			RFGD02E-12.0-638	12		7/8				
RTXVBD-15D-3			RFGD02E-15.0-640	15	7/8	1-1/8				
RTXVBD-15E-3			RFGD02E-15.0-642	15						
RTXVBD-18D-3			RFGD02E-18.0-644	18		1-3/8				
RTXVBD-18E-3			RFGD02E-18.0-646	18						
RTXVBD-2A-5	067N6170	SSE-2	RFGD03E-2.0-39	2	3/8	5/8	1/4	60	NA	R-404A / R-507
RTXVBD-2.5A-5	067N6172	SSE-3	RFGD03E-2.8-40	2.8	1/2	7/8				
RTXVBD-4A-5	067N6151	SSE-4	RFGD03E-4.2-41	4.2						
RTXVBD-5B-5	067N6150		RFGD03E-5.4-42	5.4	5/8					
RTXVBD-6A-5	067N6167	SSE-6	RFGD03E-6.4-43	6.4						
RTXVBD-7.5A-5	067N6154	SSE-7	RFGD03E-7.8-44	7.8						
RTXVBD-9A-5	067N6300		RFGD03E-9.0-532	9						
RTXVBD-9B-5	067N6301		RFGD03E-9.0-533	9	1-1/8					
RTXVBD-11A-5	067N6155	EBSSE-10	RFGD03E-11.0-535	11						
RTXVBD-11B-5	067N6181	EBSSE-10	RFGD03E-11.0-537	11						
RTXVBD-13A-5	067N6162	EBSSE-13	RFGD03E-13.0-539	13	7/8	1-3/8				
RTXVBD-13B-5		EBSSE-13	RFGD03E-13.0-541	13						
RTXVBD-9C-5			RFGD03E-9.0-627	9	5/8	7/8			122 psig (60°F)	
RTXVBD-9D-5			RFGD03E-9.0-628	9		1-1/8				
RTXVBD-11C-5			RFGD03E-11.0-630	11						
RTXVBD-11D-5			RFGD03E-11.0-632	11	7/8					
RTXVBD-13B-5			RFGD03E-13.0-634	13		1-3/8				
RTXVBD-13D-5			RFGD03E-13.0-636	13						

Ranco Part Numbers	Danfoss (TGE)	Sporlan (S / EBS)	Sanhua (RFGD)	Nominal Capacity (tons)	Connections, ODF Solder (inch)			Capillary Tube Length (inch)	MOP (Thermostatic Charge)	Refrigerants
					Inlet	Outlet	Equalizer			
					(inch)	(inch)	(inch)			
RTXVBD-1.5A-1	067N5150	SJE-2	RFGD04E-1.8-01	1.8	3/8	5/8	1/4	60	NA	R-134a
RTXVBD-2.5A-1	067N5152	SJE-2-1/2	RFGD04E-2.5-02	2.5	1/2	7/8				
RTXVBD-3.5A-1	067N5154	SJE-3	RFGD04E-3.6-03	3.6						
RTXVBD-4.5A-1	067N5156		RFGD04E-4.6-04	4.6	5/8					
RTXVBD-5.5A-1	067N5260	SJE-5	RFGD04E-5.5-49	5.5						
RTXVBD-7B-1	067N5157	SJE-6	RFGD04E-6.8-32	6.8						
RTXVBD-8A-1	067N5720	EBSJE-7	RFGD04E-8.0-501	8						
RTXVBD-8B-1		EBSJE-7	RFGD04E-8.0-502	8						
RTXVBD-10A-1	067N5161	EBSJE-9	RFGD04E-10.0-504	10	7/8	1-1/8				
RTXVBD-10B-1	067N5721	EBSJE-9	RFGD04E-10.0-520	10						
RTXVBD-12D-1	067N5163	EBSJE-12	RFGD04E-12.0-522	12						
RTXVBD-12E-1		EBSJE-12	RFGD04E-12.0-524	12	5/8	1-1/8				
RTXVBD-8D-1			RFGD04E-8.0-601	8		7/8				
RTXVBD-8C-1	067N5159		RFGD04E-8.0-602	8		7/8			1-1/8	
RTXVBD-10C-1			RFGD04E-10.0-604	10						
RTXVBD-10E-1			RFGD04E-10.0-606	10	7/8	1-3/8				
RTXVBD-12I-1			RFGD04E-12.0-608	12						
RTXVBD-12G-1	067N5165		RFGD04E-12.0-610	12	3/8	5/8			1/4	
RTXVBD-3.5B-4	067N3150		RFGD05E-3.5-22	3.5	1/2	7/8				
RTXVBD-4.5A-4	067N3152		RFGD05E-4.5-23	4.5						
RTXVBD-6.5A-4			RFGD05E-7.0-24	7	5/8					
RTXVBD-9A-4	067N3155		RFGD05E-8.6-25	8.6						
RTXVBD-11A-4	067N3296		RFGD05E-10.6-27	10.6						
RTXVBD-13C-4	067N3157		RFGD05E-12.8-26	12.8						
RTXVBD-15A-4	067N3159		RFGD05E-15.0-510	15			1-1/8			
RTXVBD-15B-4			RFGD05E-15.0-511	15						
RTXVBD-19A-4			RFGD05E-19.0-512	19						
RTXVBD-19B-4			RFGD05E-19.0-517	19	7/8	1-3/8				
RTXVBD-23B-4			RFGD05E-23.0-555	23						
RTXVBD-23C-4			RFGD05E-23.0-557	23	5/8	7/8				
RTXVBD-15C-4			RFGD05E-15.0-647	15		1-1/8				
RTXVBD-15D-4			RFGD05E-15.0-648	15						
RTXVBD-19C-4			RFGD05E-19.0-650	19	7/8					
RTXVBD-19D-4			RFGD05E-19.0-652	19						
RTXVBD-23D-4			RFGD05E-23.0-654	23						
RTXVBD-23E-4			RFGD05E-23.0-656	23						