



Type NX Valves

Thermostatic Expansion Valves

SPORLAN



ENGINEERING YOUR SUCCESS.



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The small and compact design of Sporlan's **Type NX** Thermostatic Expansion Valves makes this product ideal for foodservice and food retail applications such as display cases, ice machines, frozen drink dispensers and commercial kitchen refrigerators and freezers.

The Type NX valves feature a laser-welded stainless steel element, capillary tube, and sensing bulb assembly optimized for reliability and long life. The single pushrod balanced port design ensures precise pin and port alignment, enabling the valve to maintain superior superheat control at all load conditions.

Features and Benefits

- Long-lasting and durable stainless steel diaphragm and weld design
- Single pushrod balanced port construction
- Unique design minimizes solid debris build-up
- Suitable for all common refrigerants including R-290
- Internal or external equalizer
- Easily adjustable superheat setting
- High strength silver soldered joints with solid copper connections

Sporlan built the Type NX valve with a stainless steel capillary tube laser welded to the sensing bulb and element housing to withstand the repeated bending during installation and improve endurance to vibrations while in service.

The forged brass NX valve body is available with a straight-through flow configuration and ODF (sweat) copper connections. The valve can be supplied with either an internal or external equalizer and features a field adjustable superheat stem. Valves with fittings in metric sizes are available upon special request.

Sporlan constructed the NX valve with a single, balance-ported pushrod which is specifically designed to help flush out any solid debris build-up. The bleed port feature allows the system refrigerant to bypass the pin and port. System designers can utilize this feature to alter system performance for a variety of reasons. Bleed port options are available upon special request.

New refrigerants continue to enter the refrigeration and air conditioning market to satisfy environmental and regulatory requirements. In the past, Sporlan assigned a

letter code to each refrigerant. Now, they consolidated the Type NX valve models by refrigerant groups to simplify product application.

Additionally, the Type NX valve is available with a 3-digit alphanumeric code indicating the valve's pin and port combination, rather than a numerical "nominal" capacity.

The NX element features a 30" standard length stainless steel capillary tube. Extended 60" capillary tube lengths are available upon special request.

Specifications

The Type NX valves offer a wide range of type W thermostatic charges with or without the MOP feature. You can use the thermostatic charges with the MOP (maximum

operating pressure) feature to help protect the compressor from overloading at startup or under high load conditions. See the MOP temperature in the table below.

Compatible Refrigerants	All common HCFC, HFC, HFO refrigerants and their blends along with R-290
Compatible Lubricants	Polyolester Oil (POE), Mineral Oil (MO)
Refrigerant Group Codes	J R-134a, R-1234yf, R-513A, R-513B
	V R-22, R-407A, R-407F, R-448A, R-449A, R-290
	S R-404A, R-402A, R-507A, R-452A
	Q R-450A
Maximum Installation Temperature	250°F (120°C)
Ambient Temperature Range	-40°F to 190°F (-40°C to 88°C)
Maximum Rated Pressure	700 psig (48 bar)
Certification for Safety	UL Recognized File No. SA5460 EU PED Fluid Groups 1 and 2, Article 4, paragraph 3, DN<25
Maximum Test Pressure	800 psig (54 bar)
Maximum Ambient Temperature	150°F (65°C)
Thermostatic Charges and Evaporator Temperature Range	JW, JW40 -10°F to 40°F (-25°C to 5°C)
	VW -30°F to 40°F (-35°C to 5°C)
	VW30 -30°F to -5°F (-35°C to -20°C)
	SW -40°F to 40°F (-40°C to 5°C)
	SW45 -40°F to 0°F (-40°C to -18°C)
	QW 0°F to 40°F (-20°C to 5°C)
QW50 0°F to 30°F (-20°C to 0°C)	
Maximum Dehydration Temperature	W (without MOP) 150°F (65°C)
	W (with MOP) 250°F (120°C)

Standard static superheat settings vary based on the system refrigerant selected, but the valves are set to approximately 4°F static superheat based on the newer refrigerants such as R448A, etc. Special settings are available upon special request.




The seal cap utilizes a mechanical knife-edge seal. The torque required for proper sealing is 8 to 11 ft-lbs.

Sporlan offers 2 optional inlet strainers for use with NX valves; an insert strainer and an integral strainer.

The insert type strainer is placed into the inlet fitting prior to brazing and can only be serviced by disconnecting the liquid line.

The integral strainer, which is a feature of the SNX(E), is serviceable and allows for the strainer to be removed without disconnecting the valve from the liquid line. The integral strainer utilizes a mechanical knife edge seal. You can achieve the proper amount of torque by rotating ¼ turn past hand tight.

Valve Models

Model	Capacity Code	Connections Inlet x Outlet	JW	JW40	JW60	VW	VW30	SW	SW45	
 <p>NX Internally Equalized</p>	A07	1/4 X 3/8 ODF	NXCJ23X	—	NXC223X	NXCV23X	NXC423X	NXCS23X	NXC323X	
		1/4 X 1/2 ODF	—	—	—	NXCV24X	—	—	—	
		3/8 X 3/8 ODF	—	—	—	—	—	NXCS33X	—	
		3/8 X 1/2 ODF	—	—	—	—	—	—	—	
	A10	1/4 X 3/8 ODF	NXDJ23X	—	—	—	—	—	NXDS23X	—
		1/4 X 1/2 ODF	NXDJ24X	—	—	NXD224X	NXDV24X	—	NXDS24X	—
		3/8 X 3/8 ODF	NXDJ33X	—	—	—	—	—	—	—
		3/8 X 1/2 ODF	—	—	—	—	—	—	NXDS34X	—
	A15	1/4 X 1/2 ODF	NXEJ24X	—	—	—	—	—	—	—
		3/8 X 3/8 ODF	—	—	—	—	—	—	—	—
		3/8 X 1/2 ODF	—	—	—	—	—	—	NXES34X	—
	A30	1/4 X 1/2 ODF	—	—	—	NXF224X	—	—	NXFS24X	—
		3/8 X 3/8 ODF	NXFJ33X	—	—	NXF233X	—	—	—	—
		3/8 X 1/2 ODF	—	—	—	—	—	—	NXFS34X	—
	A45	1/4 X 1/2 ODF	—	—	—	—	—	—	—	—
		3/8 X 3/8 ODF	NXGJ33X	—	—	—	—	—	—	—
3/8 X 1/2 ODF		—	—	—	—	—	—	—	—	
B38	1/4 X 1/2 ODF	—	—	—	—	—	—	—	—	
	3/8 X 3/8 ODF	—	—	—	—	—	—	—	—	
	3/8 X 1/2 ODF	—	—	—	—	—	—	NXHS34X	—	
 <p>NXE Externally Equalized</p>	A07	1/4 X 3/8 X 1/4 ODF	—	—	—	NXCV232	—	NXCS232	—	
		1/4 X 1/2 X 1/4 ODF	—	NXC1242	—	NXCV242	—	NXCS242	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	NXCV342	—	NXCS342	—	
	A10	1/4 X 3/8 X 1/4 ODF	—	—	—	NXDV232	—	NXDS232	—	
		1/4 X 1/2 X 1/4 ODF	—	NXD1242	—	NXDV242	—	NXDS242	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	—	NXD4342	NXDS342	—	
	A15	1/4 X 3/8 X 1/4 ODF	—	—	—	—	—	NXES232	—	
		1/4 X 1/2 X 1/4 ODF	NXEJ242	—	—	NXEV242	—	NXES242	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	—	—	NXES342	NXE3342	
	A30	1/4 X 3/8 X 1/4 ODF	—	—	—	—	—	NXFS232	—	
		1/4 X 1/2 X 1/4 ODF	—	—	—	NXJV242	—	NXFS242	NXF3242	
		3/8 X 1/2 X 1/4 ODF	—	—	—	NXJV342	NXF4342	NXFS342	NXF3342	
	A45	1/4 X 3/8 X 1/4 ODF	—	—	—	—	—	—	—	
		1/4 X 1/2 X 1/4 ODF	—	—	—	—	—	—	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	NXGV342	—	NXGS342	NXG3342	
	B38	1/4 X 3/8 X 1/4 ODF	—	—	—	—	—	—	—	
		1/4 X 1/2 X 1/4 ODF	—	—	—	—	—	—	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	NXHV342	—	NXHS342	NXH3342	
	C38	1/4 X 1/2 X 1/4 ODF	—	—	—	NXJV242	—	—	—	
		3/8 X 1/2 X 1/4 ODF	—	—	—	—	—	NXJS342	NXJ3342	
		1/2 X 5/8 X 1/4 ODF	—	—	NXJ2452	—	—	—	—	
C70	3/8 X 1/2 X 1/4 ODF	—	—	—	—	—	NXKS342	—		
C80	1/2 X 5/8 X 1/4 ODF	—	—	NXL2452	—	—	—	—		
C90	1/2 X 5/8 X 1/4 ODF	—	—	—	—	—	—	—		
E70	1/2 X 5/8 X 1/4 ODF	NXPJ452	—	NXP2452	—	—	—	—		
 <p>SNXE Externally Equalized</p>	A07	3/8 X 1/2 X 1/4 ODF	—	—	—	NXCVC42	—	NXCSC42	—	
	A10		—	—	—	NXDVC42	—	—	—	
	A15		—	—	—	NXEVC42	—	NXESC42	—	
	A30		—	—	—	NXFVC42	—	NXFSC42	—	
	A45		—	—	—	—	—	NXGSC42	NXG3C42	
	B38		NXHJC42	—	—	NXHVC42	—	NXHSC42	NXH3C42	
	C38		NXJJC42	—	—	NXJVC42	—	NXJSC42	—	
	C70		NXKJC42	—	—	NXKVC42	—	NXKSC42	NXK3C42	
C80	NXLJC42	—	—	NXLVC42	—	NXLSC42	NXL3C42			

Nomenclature and Item Numbering System

Like other Sporlan Thermostatic Expansion Valves, the Type NX valves follow the nomenclature example and ordering instructions below.

Description

NXE	A10	JW	B15	3 S x 4 x 2 ODF	60"
Valve Model	Capacity Code	Thermostatic Charge	Bleed Port (Blank for no bleed port)	Connections Inlet x Outlet (Eighths of an Inch) S = Insert Strainer	Cap Tube Length (Blank for 30" standard length)

Item Number

Unlike other Sporlan Thermostatic Expansion Valves, its item number completely defines the type NX valve. The standard NX item number has 7 positions; however, item numbers can be up to 14 positions in length. Positions 8 - 14 are reserved for special OEM configurations. Refer to the following example of a standard NX item number and the position descriptions when ordering.

Item Number and Positions

N	X	D	J	B	4	2
1	2	3	4	5	6	7

Position Descriptions

1	Valve Family	N
2		X
3	Capacity Code (Refer to Capacity Selection tables)	C = A07 D = A10 E = A15 F = A30 G = A45 H = B38 J = C38 K = C70 L = C80 M = C90 P = E70
4	Thermostatic Charge	J = JW V = VW S = SW Q = QW C = CW 1 = JW40 2 = JW60 3 = SW45 4 = VW30 5 = QW50 6 = CW45
5	Inlet Configuration	2 = 1/4" ODF 3 = 3/8" ODF A = 1/4" ODF with insert strainer B = 3/8" ODF with insert strainer C = 3/8" ODF with integral (SNX) strainer
6	Outlet Configuration	3 = 3/8" ODF 4 = 1/2" ODF 5 = 5/8" ODF
7	Equalizer Configuration	X = internally equalized 2 = 1/4" ODF externally equalized

- 30 inches (76 cm) length sensing bulb capillary tube is standard.
Extended 60" (152 cm) length capillary tube available upon special request.
- Bleed ports, special air test settings, and production packing are available upon special request.

Identification and Markings

Several valve identifications are laser marked on the element, as shown.

The 5 digit date code indicates the day and year. The first 3 digits represent the day of the year. The last 2 digits are the year.

The PTS Number is a Parker Sporlan serial number.

Additional markings are on the forged brass body, including a flow direction arrow and the Sporlan trademark.

Element



Packaging

All valves are packaged in clear plastic bags for protection.

Standard NX valves are individually boxed with a bulb strap kit and are packed 24 pieces per case.

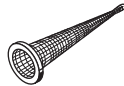
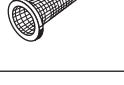
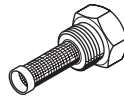
Egg crate style production packaging is available upon special request and valves come packed 36 pieces per case.

Model	Approximate Case Shipping Weight			
	Individually Boxed		Production Pack	
	lb.	kg.	lb.	kg.
NX	13.6	6.2	19.6	8.9
NXE	15.0	6.8	21.7	9.8
SNX	17.9	8.1	26.0	11.8
SNXE	19.4	8.8	28.2	12.8

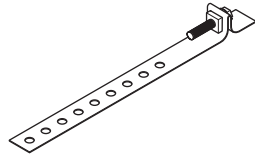
Accessories

Item Number	Description and Part Number
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Strainers

183020	Insert Strainer - 1/4" ODF P/N 1543-002	
183026	Insert Strainer - 3/8" ODF P/N 1524-000	
183002	Serviceable Integral Strainer 3/8" ODF P/N 3427-000	

Bulb Straps

183352	2 pieces of P/N 4374-000	
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Capacity Ratings and Selection

Thermostatic expansion valve capacity ratings are based on vapor free 100°F (38°C) liquid refrigerant entering the expansion valve; a maximum opening superheat of 7°F (4K); and a standard factory air test superheat setting. A discussion of the relationship between valve capacity and superheat setting (along with other important application information) can be found in Bulletin 10-9.

It is possible to correct for both liquid temperature and pressure drop using the factors in the tables following the capacity tables. The liquid temperature correction factors are refrigerant dependent, and tables are provided for each refrigerant. The pressure drop correction factor is affected by the valve and is independent of the refrigerant. The correction calculation is shown below, followed by an example calculation.

The valves are tested in accordance with ANSI/ASHRAE 17. The ratings in the capacity tables are in accordance with ANSI/AHRI Standard 750.

$$\text{TEV Capacity} = \text{TEV Rating} \times \text{CF Liquid Temperature} \times \text{CF Pressure Drop}$$

Example Calculation: The actual capacity of a Type NX valve with a C38 capacity code on R448A at 20°F evaporator temperature, 100 psi pressure drop across the TEV, and 90°F liquid temperature entering the TEV is:

$$\text{Actual Capacity} = 2.07 \text{ (from rating chart)} \times 1.08 \text{ (CF liquid temperature)} \times 0.89 \text{ (CF pressure drop)} = 1.99 \text{ tons}$$

Valve Capacity

Tons ■ psi ■ °F

kW ■ bar ■ °C

Refrigerant	Capacity Code	Evaporator Temperature °F					
		40°	20°	0°	-10°	-20°	-40°
R-134a	A07	0.21	0.20	0.15	0.14	-	-
	A10	0.27	0.25	0.19	0.17	-	-
	A15	0.37	0.33	0.25	0.24	-	-
	A30	0.66	0.59	0.43	0.40	-	-
	A45	0.91	0.84	0.62	0.57	-	-
	B38	1.01	0.92	0.67	0.62	-	-
	C38	1.35	1.23	0.91	0.84	-	-
	C70	1.88	1.68	1.20	1.08	-	-
	C80	2.25	2.04	1.51	1.41	-	-
	C90	2.41	2.19	1.61	1.50	-	-
E70	3.57	3.20	2.33	2.15	-	-	
R-513A R-513B	A07	0.18	0.17	0.13	0.12	-	-
	A10	0.23	0.21	0.15	0.14	-	-
	A15	0.31	0.28	0.21	0.20	-	-
	A30	0.56	0.49	0.35	0.33	-	-
	A45	0.77	0.70	0.51	0.47	-	-
	B38	0.85	0.77	0.56	0.51	-	-
	C38	1.14	1.03	0.75	0.70	-	-
	C70	1.59	1.40	0.99	0.89	-	-
	C80	1.91	1.71	1.25	1.16	-	-
	C90	2.04	1.83	1.34	1.24	-	-
E70	3.02	2.68	1.93	1.77	-	-	
R-1234yf	A07	0.16	0.14	0.11	0.10	-	-
	A10	0.20	0.18	0.13	0.12	-	-
	A15	0.27	0.24	0.18	0.17	-	-
	A30	0.48	0.42	0.30	0.27	-	-
	A45	0.67	0.60	0.44	0.40	-	-
	B38	0.74	0.66	0.47	0.43	-	-
	C38	0.99	0.88	0.64	0.59	-	-
	C70	1.38	1.21	0.84	0.75	-	-
	C80	1.66	1.47	1.06	0.98	-	-
	C90	1.77	1.58	1.13	1.04	-	-
E70	2.62	2.31	1.64	1.49	-	-	

Refrigerant	Capacity Code	Evaporator Temperature °C					
		5°	-5°	-15°	-20°	-30°	-40°
R-134a	A07	0.90	0.98	0.80	0.73	-	-
	A10	1.14	1.23	0.98	0.88	-	-
	A15	1.56	1.65	1.32	1.20	-	-
	A30	2.78	2.93	2.29	2.03	-	-
	A45	3.83	4.15	3.29	2.93	-	-
	B38	4.26	4.56	3.59	3.20	-	-
	C38	5.69	6.09	4.84	4.32	-	-
	C70	7.95	8.35	6.44	5.62	-	-
	C80	9.53	10.13	8.02	7.17	-	-
	C90	10.20	10.88	8.59	7.67	-	-
E70	15.08	15.94	12.47	11.04	-	-	
R-513A R-513B	A07	0.76	0.82	0.66	0.60	-	-
	A10	0.97	1.03	0.82	0.73	-	-
	A15	1.32	1.39	1.10	0.99	-	-
	A30	2.35	2.46	1.90	1.68	-	-
	A45	3.24	3.48	2.74	2.42	-	-
	B38	3.60	3.82	2.99	2.64	-	-
	C38	4.82	5.11	4.02	3.57	-	-
	C70	6.72	7.00	5.35	4.64	-	-
	C80	8.06	8.50	6.67	5.93	-	-
	C90	8.63	9.13	7.14	6.34	-	-
E70	12.76	13.37	10.36	9.12	-	-	
R-1234yf	A07	0.66	0.71	0.57	0.51	-	-
	A10	0.84	0.89	0.70	0.62	-	-
	A15	1.15	1.19	0.94	0.84	-	-
	A30	2.04	2.12	1.62	1.42	-	-
	A45	2.81	2.99	2.33	2.05	-	-
	B38	3.13	3.29	2.55	2.24	-	-
	C38	4.18	4.40	3.43	3.03	-	-
	C70	5.84	6.03	4.56	3.93	-	-
	C80	7.00	7.32	5.68	5.02	-	-
	C90	7.49	7.86	6.09	5.37	-	-
E70	11.08	11.51	8.83	7.73	-	-	

Capacity Ratings and Selection

Valve Capacity

Tons ■ psi ■ °F

kW ■ bar ■ °C

Refrigerant	Capacity Code	Evaporator Temperature °F					
		40°	20°	0°	-10°	-20°	-40°
R-404A	A07	0.22	0.19	0.15	0.16	0.13	0.10
	A10	0.29	0.24	0.18	0.19	0.16	0.12
	A15	0.39	0.32	0.24	0.26	0.22	0.17
	A30	0.70	0.57	0.43	0.45	0.38	0.26
	A45	0.93	0.81	0.62	0.65	0.55	0.38
	B38	1.07	0.89	0.67	0.71	0.60	0.43
	C38	1.43	1.18	0.90	0.96	0.81	0.57
	C70	2.02	1.64	1.21	1.29	1.06	0.71
	C80	2.39	1.98	1.49	1.58	1.33	0.93
	C90	2.56	2.13	1.59	1.69	1.43	1.01
E70	3.80	3.12	2.32	2.46	2.06	1.43	
R-507A	A07	0.22	0.18	0.14	0.15	0.13	0.10
	A10	0.28	0.23	0.18	0.19	0.16	0.12
	A15	0.38	0.31	0.23	0.25	0.21	0.16
	A30	0.68	0.56	0.41	0.44	0.37	0.25
	A45	0.90	0.78	0.60	0.63	0.53	0.37
	B38	1.04	0.86	0.65	0.68	0.58	0.41
	C38	1.39	1.14	0.87	0.93	0.78	0.55
	C70	1.95	1.59	1.17	1.24	1.02	0.68
	C80	2.32	1.91	1.44	1.53	1.29	0.90
	C90	2.48	2.06	1.54	1.63	1.38	0.97
E70	3.68	3.02	2.24	2.38	1.99	1.37	
R-452A	A07	0.23	0.20	0.15	0.16	0.14	0.10
	A10	0.30	0.25	0.19	0.20	0.17	0.12
	A15	0.41	0.34	0.25	0.27	0.23	0.17
	A30	0.73	0.60	0.44	0.47	0.39	0.27
	A45	0.97	0.84	0.64	0.68	0.57	0.40
	B38	1.11	0.93	0.70	0.74	0.62	0.44
	C38	1.49	1.23	0.94	1.00	0.84	0.59
	C70	2.10	1.71	1.26	1.34	1.10	0.74
	C80	2.50	2.06	1.55	1.64	1.39	0.97
	C90	2.66	2.22	1.66	1.76	1.49	1.05
E70	3.96	3.25	2.42	2.56	2.15	1.49	
R-402A	A07	0.23	0.20	0.16	0.17	0.14	0.11
	A10	0.30	0.25	0.19	0.21	0.18	0.13
	A15	0.41	0.34	0.26	0.27	0.24	0.18
	A30	0.73	0.60	0.45	0.48	0.41	0.29
	A45	0.97	0.85	0.65	0.70	0.59	0.42
	B38	1.12	0.94	0.71	0.75	0.64	0.46
	C38	1.50	1.24	0.96	1.02	0.86	0.61
	C70	2.11	1.72	1.29	1.37	1.13	0.77
	C80	2.50	2.08	1.58	1.68	1.43	1.01
	C90	2.67	2.24	1.69	1.80	1.53	1.09
E70	3.97	3.29	2.46	2.62	2.21	1.54	

Refrigerant	Capacity Code	Evaporator Temperature °C					
		5°	-5°	-15°	-20°	-30°	-40°
R-404A	A07	0.73	0.73	0.60	0.58	0.50	0.35
	A10	0.94	0.93	0.75	0.71	0.60	0.42
	A15	1.29	1.27	0.99	0.94	0.81	0.58
	A30	2.28	2.25	1.75	1.65	1.39	0.93
	A45	3.05	3.13	2.52	2.39	2.02	1.35
	B38	3.50	3.48	2.74	2.59	2.20	1.50
	C38	4.68	4.62	3.69	3.51	2.97	2.00
	C70	6.60	6.42	5.00	4.70	3.88	2.49
	C80	7.84	7.73	6.10	5.78	4.91	3.28
	C90	8.37	8.31	6.55	6.19	5.25	3.53
E70	12.44	12.22	9.55	9.01	7.58	5.01	
R-507A	A07	0.70	0.71	0.58	0.56	0.48	0.34
	A10	0.91	0.90	0.72	0.69	0.58	0.40
	A15	1.25	1.23	0.96	0.91	0.79	0.56
	A30	2.21	2.18	1.70	1.60	1.34	0.89
	A45	2.95	3.03	2.43	2.31	1.94	1.30
	B38	3.39	3.37	2.65	2.51	2.12	1.44
	C38	4.54	4.47	3.57	3.39	2.86	1.92
	C70	6.40	6.21	4.83	4.55	3.75	2.40
	C80	7.59	7.48	5.90	5.58	4.73	3.15
	C90	8.11	8.04	6.33	5.98	5.07	3.40
E70	12.05	11.83	9.24	8.71	7.31	4.82	
R-452A	A07	0.76	0.76	0.63	0.60	0.52	0.36
	A10	0.98	0.97	0.78	0.74	0.63	0.44
	A15	1.34	1.32	1.03	0.98	0.85	0.60
	A30	2.38	2.34	1.83	1.72	1.45	0.96
	A45	3.18	3.26	2.62	2.49	2.10	1.40
	B38	3.65	3.62	2.85	2.70	2.29	1.56
	C38	4.88	4.81	3.84	3.65	3.09	2.08
	C70	6.88	6.69	5.20	4.90	4.04	2.59
	C80	8.17	8.05	6.35	6.01	5.10	3.41
	C90	8.73	8.65	6.82	6.44	5.46	3.67
E70	12.97	12.72	9.94	9.38	7.89	5.21	
R-402A	A07	0.76	0.77	0.64	0.61	0.53	0.38
	A10	0.98	0.98	0.79	0.75	0.65	0.45
	A15	1.34	1.33	1.05	1.00	0.87	0.63
	A30	2.39	2.36	1.86	1.76	1.49	1.00
	A45	3.19	3.29	2.66	2.54	2.16	1.46
	B38	3.66	3.66	2.90	2.75	2.35	1.62
	C38	4.90	4.86	3.90	3.72	3.17	2.16
	C70	6.90	6.75	5.29	5.00	4.15	2.69
	C80	8.20	8.12	6.46	6.14	5.25	3.54
	C90	8.75	8.74	6.93	6.58	5.62	3.81
E70	13.01	12.84	10.11	9.57	8.11	5.41	

Capacity Ratings and Selection

Valve Capacity

Tons ■ psi ■ °F

kW ■ bar ■ °C

Refrigerant	Capacity Code	Evaporator Temperature °F					
		40°	20°	0°	-10°	-20°	-40°
R-448A R-449A	A07	0.38	0.32	0.27	0.24	0.21	–
	A10	0.53	0.41	0.34	0.30	0.26	–
	A15	0.69	0.57	0.46	0.40	0.35	–
	A30	1.17	1.01	0.83	0.72	0.62	–
	A45	1.48	1.35	1.14	1.02	0.89	–
	B38	1.86	1.55	1.27	1.12	0.97	–
	C38	2.45	2.07	1.69	1.49	1.31	–
	C70	3.54	2.92	2.36	2.04	1.75	–
	C80	4.10	3.46	2.83	2.48	2.15	–
	C90	4.35	3.70	3.03	2.67	2.31	–
E70	6.53	5.49	4.48	3.90	3.36	–	
R-407A	A07	0.38	0.32	0.27	0.24	0.22	–
	A10	0.53	0.42	0.34	0.30	0.27	–
	A15	0.70	0.57	0.47	0.41	0.35	–
	A30	1.17	1.01	0.83	0.72	0.62	–
	A45	1.49	1.35	1.14	1.02	0.89	–
	B38	1.86	1.55	1.27	1.12	0.97	–
	C38	2.46	2.08	1.70	1.50	1.31	–
	C70	3.55	2.93	2.37	2.05	1.76	–
	C80	4.11	3.48	2.84	2.49	2.16	–
	C90	4.37	3.71	3.04	2.68	2.31	–
E70	6.56	5.52	4.50	3.92	3.37	–	
R-290	A07	0.50	0.41	0.34	0.31	0.27	–
	A10	0.68	0.53	0.44	0.39	0.34	–
	A15	0.90	0.73	0.59	0.52	0.45	–
	A30	1.52	1.30	1.06	0.92	0.79	–
	A45	1.93	1.74	1.46	1.31	1.14	–
	B38	2.42	2.00	1.62	1.43	1.23	–
	C38	3.19	2.67	2.17	1.91	1.67	–
	C70	4.60	3.77	3.03	2.61	2.24	–
	C80	5.33	4.47	3.63	3.18	2.75	–
	C90	5.66	4.77	3.89	3.42	2.94	–
E70	8.50	7.10	5.75	4.99	4.28	–	
R-22	A07	0.44	0.38	0.32	0.29	0.26	–
	A10	0.61	0.48	0.40	0.36	0.32	–
	A15	0.80	0.67	0.55	0.48	0.42	–
	A30	1.35	1.18	0.98	0.86	0.74	–
	A45	1.72	1.58	1.35	1.22	1.08	–
	B38	2.15	1.81	1.50	1.34	1.16	–
	C38	2.84	2.43	2.01	1.79	1.58	–
	C70	4.10	3.42	2.81	2.44	2.11	–
	C80	4.75	4.06	3.36	2.97	2.60	–
	C90	5.05	4.34	3.60	3.19	2.78	–
E70	7.57	6.44	5.32	4.67	4.05	–	

Refrigerant	Capacity Code	Evaporator Temperature °C					
		5°	-5°	-15°	-20°	-30°	-40°
R-448A R-449A	A07	1.25	1.25	1.06	0.98	0.73	–
	A10	1.72	1.63	1.36	1.23	0.90	–
	A15	2.27	2.22	1.85	1.67	1.19	–
	A30	3.82	3.91	3.30	2.96	2.10	–
	A45	4.86	5.18	4.51	4.13	3.04	–
	B38	6.08	6.03	5.06	4.57	3.29	–
	C38	8.03	8.05	6.76	6.11	4.45	–
	C70	11.58	11.40	9.47	8.46	5.98	–
	C80	13.41	13.48	11.32	10.20	7.34	–
	C90	14.25	14.38	12.11	10.93	7.86	–
E70	21.38	21.40	17.93	16.09	11.44	–	
R-407A	A07	1.26	1.26	1.07	0.98	0.73	–
	A10	1.73	1.64	1.36	1.24	0.90	–
	A15	2.28	2.23	1.86	1.67	1.19	–
	A30	3.84	3.93	3.31	2.97	2.11	–
	A45	4.88	5.20	4.52	4.15	3.05	–
	B38	6.11	6.06	5.08	4.59	3.30	–
	C38	8.06	8.09	6.79	6.13	4.47	–
	C70	11.63	11.45	9.51	8.49	6.00	–
	C80	13.47	13.53	11.37	10.24	7.36	–
	C90	14.32	14.44	12.16	10.98	7.89	–
E70	21.48	21.49	18.00	16.16	11.48	–	
R-290	A07	1.63	1.62	1.37	1.25	0.93	–
	A10	2.24	2.11	1.74	1.58	1.15	–
	A15	2.95	2.87	2.39	2.14	1.52	–
	A30	4.97	5.06	4.24	3.80	2.68	–
	A45	6.32	6.70	5.80	5.30	3.88	–
	B38	7.91	7.80	6.51	5.86	4.20	–
	C38	10.44	10.42	8.70	7.84	5.69	–
	C70	15.07	14.75	12.18	10.85	7.63	–
	C80	17.45	17.43	14.56	13.08	9.37	–
	C90	18.54	18.60	15.58	14.02	10.04	–
E70	27.82	27.68	23.06	20.64	14.61	–	
R-22	A07	1.45	1.46	1.26	1.16	0.88	–
	A10	2.00	1.91	1.61	1.47	1.09	–
	A15	2.63	2.60	2.20	1.99	1.44	–
	A30	4.43	4.58	3.91	3.53	2.53	–
	A45	5.63	6.06	5.34	4.92	3.67	–
	B38	7.05	7.06	5.99	5.45	3.97	–
	C38	9.30	9.43	8.01	7.28	5.37	–
	C70	13.42	13.34	11.21	10.08	7.21	–
	C80	15.55	15.77	13.40	12.15	8.85	–
	C90	16.52	16.83	14.34	13.03	9.48	–
E70	24.79	25.05	21.23	19.18	13.80	–	

Capacity Ratings and Selection

Correction Factors

Valve Pressure Drop

Tons ■ psi ■ °F

Evaporator Temperature °F	Pressure Drop Across TEV (psi)										
	30	50	75	100	125	150	175	200	225	250	275
	Correction Factor, CF Pressure Drop										
40°	0.55	0.71	0.87	1.00	1.12	1.22	1.32	1.41	1.50	1.58	1.66
20° & 0°	0.49	0.63	0.77	0.89	1.00	1.10	1.18	1.26	1.34	1.41	1.48
-10° & -20°	0.45	0.58	0.71	0.82	0.91	1.00	1.08	1.15	1.22	1.29	1.35
-40°	0.41	0.53	0.65	0.76	0.85	0.93	1.00	1.07	1.13	1.20	1.25

Liquid Temperature

Tons ■ psi ■ °F

Refrigerant	Liquid Temperature Entering Valve °F										
	20°	30°	40°	50°	60°	70°	80°	90°	100°	110°	120°
	Correction Factor, CF Pressure Drop										
R-134a	1.56	1.49	1.42	1.35	1.28	1.21	1.14	1.07	1.00	0.93	0.86
R-1234yf	1.72	1.63	1.54	1.45	1.36	1.27	1.18	1.09	1.00	0.91	0.82
R-513A	1.65	1.57	1.49	1.41	1.33	1.25	1.17	1.08	1.00	0.92	0.83
R-22	1.46	1.40	1.34	1.29	1.23	1.18	1.12	1.06	1.00	0.94	0.88
R-407A	1.63	1.55	1.48	1.40	1.32	1.24	1.16	1.08	1.00	0.92	0.83
R-407C & R-407F	1.58	1.51	1.44	1.37	1.30	1.22	1.15	1.08	1.00	0.92	0.85
R-448A & R-449A	1.63	1.55	1.48	1.40	1.32	1.24	1.16	1.08	1.00	0.92	0.83
R-290	1.56	1.49	1.42	1.36	1.29	1.22	1.15	1.07	1.00	0.93	0.85
R-404A	1.82	1.72	1.62	1.52	1.42	1.32	1.22	1.11	1.00	0.89	0.78
R-402A	1.73	1.64	1.56	1.47	1.38	1.29	1.19	1.10	1.00	0.90	0.80
R-507A	1.85	1.75	1.64	1.54	1.44	1.33	1.22	1.11	1.00	0.89	0.77
R-452A	1.80	1.70	1.61	1.51	1.41	1.31	1.21	1.11	1.00	0.89	0.79
R-450A	1.59	1.51	1.44	1.37	1.30	1.22	1.15	1.07	1.00	0.93	0.85

Valve Pressure Drop

kW ■ bar ■ °C

Evaporator Temperature °C	Pressure Drop Across TEV (bar)							
	2	4	6	8	10	12	14	16
	Correction Factor, CF Pressure Drop							
5° & 10°	0.58	0.82	1.00	1.15	1.29	1.41	1.53	1.63
-5° & -15°	0.50	0.71	0.87	1.00	1.12	1.22	1.32	1.41
-20° & -30°	0.45	0.63	0.77	0.89	1.00	1.11	1.18	1.26
-40°	0.41	0.58	0.71	0.82	0.91	1.00	1.08	1.15

Liquid Temperature

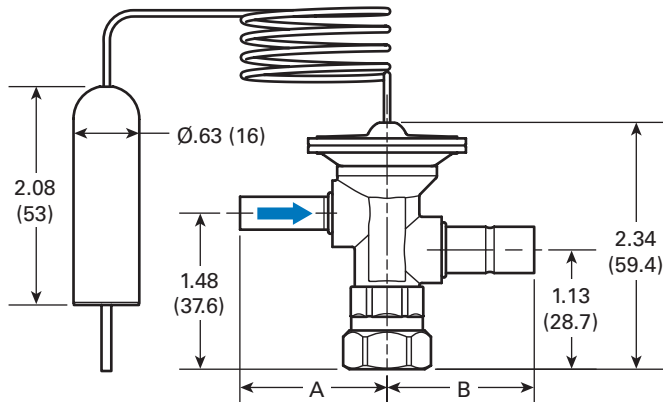
kW ■ bar ■ °C

Refrigerant	Liquid Temperature Entering Valve °C										
	-5°	0°	5°	10°	15°	20°	25°	30°	35°	38°	45°
	Correction Factor, CF Pressure Drop										
R-134a	1.54	1.48	1.41	1.35	1.29	1.23	1.16	1.10	1.04	1.00	0.91
R-1234yf	1.69	1.61	1.53	1.45	1.37	1.29	1.21	1.13	1.05	1.00	0.88
R-513A	1.63	1.56	1.49	1.41	1.34	1.27	1.19	1.12	1.04	1.00	0.89
R-22	1.44	1.39	1.34	1.29	1.24	1.19	1.13	1.08	1.03	1.00	0.92
R-407A	1.60	1.54	1.47	1.40	1.33	1.26	1.19	1.12	1.04	1.00	0.89
R-407C & R-407F	1.56	1.50	1.43	1.37	1.30	1.24	1.17	1.11	1.04	1.00	0.90
R-448A & R-449A	1.60	1.54	1.47	1.40	1.33	1.26	1.19	1.12	1.04	1.00	0.89
R-290	1.54	1.48	1.42	1.36	1.29	1.23	1.17	1.10	1.04	1.00	0.90
R-404A	1.79	1.70	1.61	1.52	1.43	1.34	1.25	1.15	1.06	1.00	0.86
R-402A	1.71	1.63	1.55	1.47	1.39	1.30	1.22	1.14	1.05	1.00	0.87
R-507A	1.82	1.73	1.63	1.54	1.45	1.35	1.26	1.16	1.06	1.00	0.85
R-452A	1.77	1.68	1.60	1.51	1.42	1.33	1.24	1.15	1.05	1.00	0.86
R-450A	1.56	1.50	1.43	1.37	1.30	1.24	1.17	1.10	1.04	1.00	0.90

Dimensions - Inches (mm)

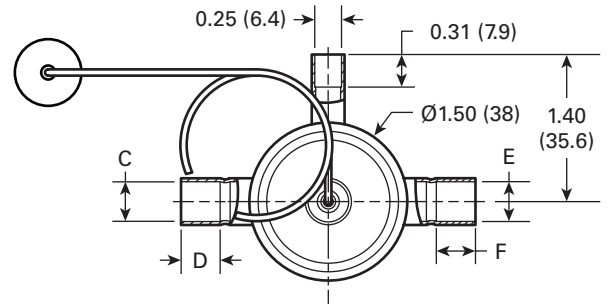
Type NX(E)

Front View



Top View

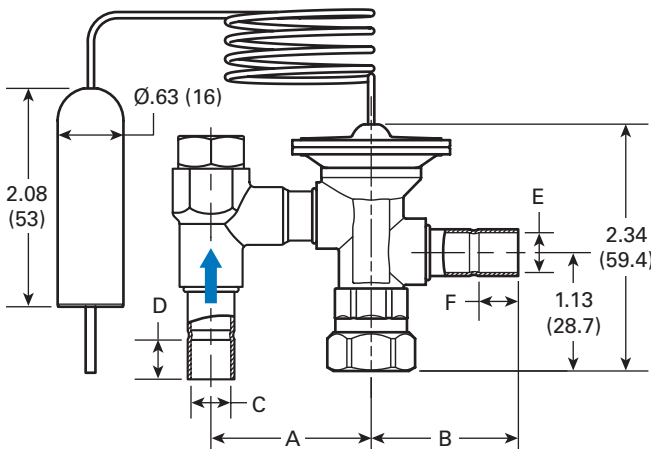
External 1/4" ODF Equalizer Fitting



Model	Connections Inlet x Outlet	Dimensions - Inches (mm)					
		A	B	C	D	E	F
NX Internally Equalized	1/4 X 3/8 ODF	1.4 (35.6)	1.4 (35.6)	0.25 (6.4)	0.31 (7.9)	0.38 (9.7)	0.38 (9.7)
	1/4 X 1/2 ODF			0.44 (11.2)	0.21 (5.3)		
	3/8 X 3/8 ODF		0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	
	3/8 X 1/2 ODF				0.44 (11.2)	0.21 (5.3)	
	3/8 X 5/8 ODF				0.28 (7.1)		
NXE Externally Equalized	1/4 X 3/8 X 1/4 ODF	1.4 (35.6)	1.4 (35.6)	0.25 (6.4)	0.31 (7.9)	0.38 (9.7)	0.38 (9.7)
	1/4 X 1/2 X 1/4 ODF			0.44 (11.2)	0.21 (5.3)		
	3/8 X 3/8 X 1/4 ODF		0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	
	3/8 X 1/2 X 1/4 ODF				0.44 (11.2)	0.21 (5.3)	
	3/8 X 5/8 X 1/4 ODF				0.28 (7.1)		

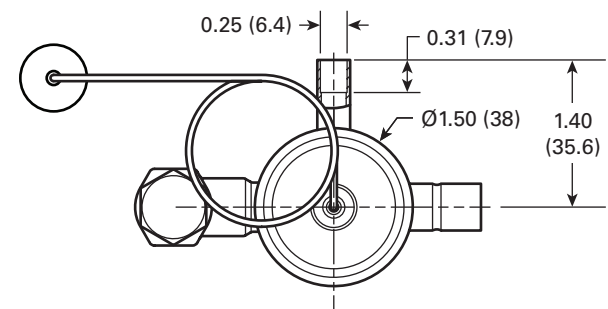
Type SNX(E)

Front View



Top View

External 1/4" ODF Equalizer Fitting



Model	Connections Inlet x Outlet	Dimensions - Inches (mm)					
		A	B	C	D	E	F
SNX Internally Equalized	1/4 X 3/8 ODF	1.53 (38.9)	1.4 (35.6)	0.25 (6.4)	0.31 (7.9)	0.38 (9.7)	0.38 (9.7)
	1/4 X 1/2 ODF			0.44 (11.2)	0.21 (5.3)		
	3/8 X 3/8 ODF		0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	
	3/8 X 1/2 ODF				0.44 (11.2)	0.21 (5.3)	
	3/8 X 5/8 ODF				0.28 (7.1)		
SNXE Externally Equalized	1/4 X 3/8 X 1/4 ODF	1.53 (38.9)	1.4 (35.6)	0.25 (6.4)	0.31 (7.9)	0.38 (9.7)	0.38 (9.7)
	1/4 X 1/2 X 1/4 ODF			0.44 (11.2)	0.21 (5.3)		
	3/8 X 3/8 X 1/4 ODF		0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	0.38 (9.7)	
	3/8 X 1/2 X 1/4 ODF				0.44 (11.2)	0.21 (5.3)	
	3/8 X 5/8 X 1/4 ODF				0.28 (7.1)		

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