

Electronic Expansion Valves FX Series

Emerson **FX** are stepper motor driven electronic expansion valves for precise control of refrigerant mass flow in air conditioning, heat pumps, close control, and industrial process cooling applications.

Features

- Flexibility by configuration of outlet connection in 4 directions
- Stepper motor driven
- High resolution and excellent repeatability
- Linear flow capacity
- Extremely wide capacity range (10...100%)
- Continuous modulation of mass flow, no stress (liquid hammering) in the refrigeration circuit
- Direct coupling of motor and valve for high reliability (no gear mechanism)



FX7

Selection table

Type	Part No.	Inlet connection ODF	Outlet connection ODF	Electric connection
FX5-U07	801336	7/8"	7/8"	Suitable for M12 plug (order separately)
FX6-I09	801337	1-1/8"	1-1/8"	
FX6-M28	801338	28 mm	28 mm	
FX6.5-I09	801339	1-1/8"	1-1/8"	
FX6.5-M28	801340	28 mm	28 mm	
FX7-U11	801341	1-3/8"	1-3/8"	
FX7.5-U11	801342	1-3/8"	1-3/8"	
FX8-I13	801343	1-5/8"	1-5/8"	
FX8-M42	801344	42 mm	42 mm	
FX9-U17		2-1/8"	2-1/8"	

Cable and Connector Assembly

Type	Part No.	Temperature range	Length	Connector type to valve	Connector type to driver board or controller	Illustration
EXV-M15	804663	-50 ... +80°C	1.5 m	M12	Loose wires	
EXV-M30	804664		3.0 m			
EXV-M60	804665		6.0 m			

Nominal capacities (kW)

Type	R134a	R410A	R407C	R22	R450A	R513A	R1234ze
FX5	40	60	54	52	27.3	27.9	31.3
FX6	90	136	123	116	65	66	74
FX6.5	145	220	200	190	99	101	113
FX7	300	450	400	390	211	216	242
FX7.5	460	700	630	600	314	321	360
FX8	730	1100	990	944	498	510	571
FX9	1700	-	2310	2200	1159	1187	1329

Note: Nominal capacities of FX7.5/8/9 might be modified. Please contact sales office.

The nominal capacity is based on the following conditions:

Refrigerant	Evaporating temperature	Condensing temperature	Subcooling
R134a, R410A & R22	+4°C	+38°C	1K
R407C	+4°C dew point	+38°C bubble/ +43°C dew point	
R513A & R1234ze	+4°C	+38°C bubble/ +38°C dew point	
R450A	+4°C dew point	+38°C bubble/ +38.6°C dew point	

Note: For other operating conditions use the quick selection in this document or the "Controls Navigator" selection tool (download from www.emersonclimate.eu).

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R134a Capacity (kW)													Valve type
	Evaporating temperature (°C)													
	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	
70	39	39	40	40	40	39	39	38	37	36	35	34	33	FX5
	87	88	89	89	89	88	87	85	84	81	79	77	74	FX6
	140	142	144	144	143	142	140	138	135	131	127	123	119	FX6.5
	289	294	297	298	297	294	290	285	278	271	264	255	246	FX7
	443	451	455	456	455	451	444	436	427	416	404	391	377	FX7.5
	703	716	723	724	722	715	705	693	677	660	641	621	599	FX8
	1637	1667	1683	1687	1681	1665	1642	1613	1578	1537	1493	1445	1395	FX9
65	38	39	40	40	40	40	40	39	39	38	37	36	35	FX5
	85	88	89	90	91	90	90	88	87	85	83	81	78	FX6
	137	141	144	146	146	145	144	142	140	137	134	130	126	FX6.5
	284	293	298	301	302	301	298	295	290	284	277	269	261	FX7
	436	449	457	462	463	462	458	452	444	435	424	413	400	FX7.5
	692	712	726	733	735	732	726	717	705	690	673	655	635	FX8
	1611	1659	1690	1707	1711	1706	1691	1669	1641	1607	1568	1525	1479	FX9
60	36	38	39	40	40	40	40	40	40	39	38	37	36	FX5
	82	86	88	90	91	91	91	90	89	87	86	84	82	FX6
	132	138	142	145	146	147	146	145	143	141	138	135	131	FX6.5
	273	285	294	299	303	303	303	300	296	292	286	279	272	FX7
	419	438	451	459	464	465	464	460	454	447	438	428	417	FX7.5
	664	694	715	729	736	738	736	730	721	709	695	679	661	FX8
	1547	1617	1666	1697	1714	1719	1714	1701	1679	1652	1619	1582	1540	FX9
55	34	36	38	39	40	40	40	40	40	39	39	38	37	FX5
	76	81	85	88	89	90	91	90	90	89	87	86	84	FX6
	123	131	137	141	144	146	146	146	145	143	141	138	135	FX6.5
	255	272	284	293	298	301	302	301	299	296	291	285	279	FX7
	390	416	435	449	457	462	463	462	459	453	446	437	428	FX7.5
	619	661	691	712	726	733	736	734	728	719	708	694	679	FX8
	1442	1539	1609	1658	1690	1707	1713	1708	1695	1675	1648	1617	1581	FX9
50	30	33	36	37	39	39	40	40	40	39	39	38	38	FX5
	68	75	80	84	87	88	89	90	89	89	88	86	85	FX6
	110	121	130	136	140	142	144	144	144	143	141	139	137	FX6.5
	227	251	268	280	289	295	298	299	298	296	292	288	283	FX7
	348	385	411	430	443	452	457	458	457	454	448	441	433	FX7.5
	553	610	652	682	703	717	725	727	725	720	711	701	687	FX8
	1288	1421	1519	1589	1638	1670	1687	1693	1689	1676	1657	1631	1601	FX9
45	25	30	33	35	37	38	39	39	39	39	39	38	38	FX5
	56	66	74	79	82	85	87	88	88	88	87	86	85	FX6
	91	107	118	127	133	137	140	141	142	141	140	139	137	FX6.5
	188	221	245	262	275	283	289	292	293	292	290	287	283	FX7
	288	339	376	402	421	435	443	448	449	448	445	440	434	FX7.5
	457	539	597	638	669	690	703	711	713	712	707	699	688	FX8
	1064	1254	1389	1487	1557	1606	1638	1655	1661	1657	1645	1627	1602	FX9
40	17	24	28	32	34	36	37	38	38	38	38	38	37	FX5
	38	54	64	71	76	80	83	84	85	86	85	85	84	FX6
	61	87	103	115	123	129	133	136	137	138	138	137	135	FX6.5
	126	180	214	238	255	267	276	281	284	286	285	283	280	FX7
	194	275	328	364	391	410	423	431	436	438	437	434	429	FX7.5
	307	437	520	578	620	650	671	685	692	695	693	688	681	FX8
	715	1017	1211	1346	1444	1514	1563	1594	1612	1618	1614	1603	1585	FX9
30			13	21	26	29	31	33	34	35	35	35	35	FX5
			29	47	58	65	70	74	76	78	79	79	79	FX6
			47	76	93	105	113	119	123	126	127	128	128	FX6.5
			97	157	193	217	234	247	255	260	263	265	264	FX7
			148	240	295	333	359	378	391	399	404	406	405	FX7.5
			235	382	469	528	570	600	620	634	641	644	643	FX8
			548	889	1091	1229	1328	1397	1445	1476	1493	1499	1497	FX9

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R410A Capacity (kW)													Valve type
	Evaporating temperature (°C)													
	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	
68	40	42	43	44	45	46	46	46	45	45	44	44	43	FX5
	92	95	98	101	102	103	104	103	103	102	100	99	97	FX6
	148	154	159	163	165	167	167	167	166	165	162	160	156	FX6.5
	303	316	326	333	338	341	342	342	340	337	332	327	320	FX7
	472	491	507	518	526	531	533	532	529	524	517	508	498	FX7.5
	741	772	796	814	827	834	837	836	831	823	812	799	782	FX8
65	44	46	48	49	50	50	51	51	51	50	50	49	48	FX5
	99	104	108	111	113	114	115	115	115	114	113	111	109	FX6
	161	168	174	179	182	185	186	186	186	184	183	180	177	FX6.5
	328	344	357	366	373	377	380	381	380	377	373	368	362	FX7
	511	535	555	569	580	587	591	592	591	587	581	573	563	FX7.5
	803	841	872	895	912	923	929	930	928	922	913	900	885	FX8
60	46	49	51	53	54	55	56	56	56	56	56	55	55	FX5
	105	111	116	120	123	125	127	127	128	127	126	125	124	FX6
	169	179	188	194	199	202	205	206	206	206	205	203	200	FX6.5
	346	367	384	397	407	414	419	421	422	421	418	414	409	FX7
	539	571	597	617	633	644	651	655	656	655	651	645	636	FX7.5
	847	897	938	970	994	1012	1023	1030	1031	1029	1023	1013	1000	FX8
55	46	50	52	55	56	58	59	59	60	60	60	59	59	FX5
	104	112	119	124	128	131	133	135	135	136	135	134	133	FX6
	169	182	192	200	207	212	215	218	219	219	219	217	215	FX6.5
	345	372	393	410	423	433	441	445	448	449	447	445	441	FX7
	537	578	611	638	658	674	685	693	697	698	696	692	685	FX7.5
	843	908	961	1002	1035	1059	1077	1089	1095	1097	1094	1087	1077	FX8
50	44	48	52	55	57	59	60	61	62	62	62	62	62	FX5
	99	109	118	124	129	133	136	139	140	141	141	140	139	FX6
	160	177	190	201	209	216	221	224	226	227	228	227	226	FX6.5
	328	362	389	411	428	441	451	458	463	465	466	464	462	FX7
	510	563	605	639	665	686	702	713	720	724	724	722	718	FX7.5
	801	884	951	1004	1046	1078	1103	1120	1132	1137	1138	1135	1128	FX8
45	39	45	50	53	56	59	60	62	63	63	63	63	63	FX5
	89	102	113	121	128	133	137	140	142	143	144	144	143	FX6
	144	165	182	196	206	215	221	226	229	232	233	233	232	FX6.5
	294	338	373	400	422	439	452	462	469	474	476	476	474	FX7
	457	526	580	623	656	683	704	719	730	737	740	740	738	FX7.5
	718	826	911	978	1032	1073	1106	1130	1147	1158	1163	1163	1160	FX8
40	32	40	46	51	54	57	59	61	62	63	64	64	64	FX5
	72	90	104	115	123	129	135	138	141	143	145	145	145	FX6
	116	146	168	185	199	209	218	224	229	232	234	235	235	FX6.5
	237	299	344	379	407	428	445	458	468	474	479	480	480	FX7
	369	465	535	590	632	666	693	713	728	738	744	747	747	FX7.5
	580	730	841	926	994	1047	1088	1120	1143	1160	1170	1174	1174	FX8
35		32	40	46	51	54	57	60	61	62	63	64	64	FX5
		72	91	105	115	123	130	135	139	142	144	145	145	FX6
		116	147	169	186	200	210	218	225	229	232	234	235	FX6.5
		237	300	346	381	409	430	447	459	469	475	479	480	FX7
		369	467	538	593	636	669	695	715	729	739	745	747	FX7.5
	580	734	846	932	999	1051	1092	1123	1146	1161	1170	1174	FX8	
30			31	40	46	51	54	57	59	61	62	63	63	FX5
			71	90	104	115	123	129	134	138	141	142	144	FX6
			114	146	168	186	199	209	217	223	228	230	232	FX6.5
			234	298	345	380	407	428	444	457	466	471	475	FX7
			364	464	536	591	633	666	691	710	724	733	739	FX7.5
		572	729	842	928	995	1047	1086	1116	1138	1152	1161	FX8	

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R407C													Valve type
	Capacity (kW)													
	Evaporating temperature (°C)													
	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	
65	50	51	52	53	53	53	53	52	52	51	50	49	47	FX5
	113	116	118	120	120	120	120	119	117	116	113	111	108	FX6
	183	189	192	195	196	196	195	193	191	188	184	180	176	FX6.5
	367	377	385	389	391	392	390	386	382	376	369	361	352	FX7
	578	594	606	613	616	617	614	609	601	592	581	568	554	FX7.5
	908	934	952	963	969	969	965	956	945	930	912	892	871	FX8
	2119	2179	2221	2248	2260	2261	2251	2232	2204	2170	2129	2082	2031	FX9
60	50	51	53	54	54	55	55	55	54	53	53	52	51	FX5
	113	117	120	123	124	125	125	124	123	122	120	118	115	FX6
	184	191	196	200	202	203	203	202	200	198	195	191	187	FX6.5
	367	381	392	399	404	406	406	404	400	396	390	383	375	FX7
	578	601	617	628	636	639	639	636	631	623	614	603	590	FX7.5
	909	944	970	988	999	1004	1004	999	991	979	964	947	927	FX8
	2120	2202	2263	2304	2330	2342	2342	2332	2313	2285	2250	2210	2164	FX9
55	48	51	53	54	55	56	56	56	56	55	55	54	53	FX5
	110	116	120	123	126	127	128	128	127	126	124	123	120	FX6
	179	188	195	201	204	206	207	207	206	205	202	199	196	FX6.5
	358	377	391	401	408	413	415	415	413	409	405	399	391	FX7
	564	594	616	632	643	650	653	653	650	645	637	628	617	FX7.5
	886	933	968	993	1011	1022	1026	1026	1022	1013	1001	986	969	FX8
	2068	2176	2258	2318	2359	2384	2395	2395	2384	2364	2336	2301	2261	FX9
50	46	49	52	54	55	56	56	57	57	56	56	55	54	FX5
	104	112	118	122	125	127	128	129	129	128	127	126	124	FX6
	170	182	191	198	203	207	209	210	210	209	207	204	202	FX6.5
	340	364	383	397	407	414	418	420	419	417	414	409	403	FX7
	535	573	603	625	640	651	658	661	660	657	652	644	635	FX7.5
	841	901	947	981	1006	1024	1034	1038	1038	1033	1024	1012	997	FX8
	1962	2102	2209	2290	2348	2388	2412	2423	2422	2410	2390	2362	2327	FX9
45	42	46	49	52	54	55	56	57	57	57	56	56	55	FX5
	95	105	113	118	123	126	128	129	129	129	129	127	126	FX6
	155	171	183	192	199	204	207	209	210	210	209	207	205	FX6.5
	311	342	366	385	398	408	415	419	421	420	418	414	410	FX7
	489	539	577	606	627	643	654	660	662	662	658	653	645	FX7.5
	769	847	907	952	986	1010	1027	1037	1041	1040	1035	1026	1014	FX8
	1793	1977	2116	2222	2301	2358	2396	2419	2429	2426	2414	2394	2366	FX9
40	36	42	46	49	52	54	55	56	56	56	56	56	56	FX5
	82	95	105	112	118	122	125	127	128	129	128	128	127	FX6
	134	155	171	183	192	199	203	206	208	209	209	208	206	FX6.5
	268	310	342	366	384	397	407	413	417	418	418	415	412	FX7
	422	489	538	576	604	625	640	650	656	658	658	654	648	FX7.5
	663	768	846	905	949	983	1006	1022	1031	1035	1033	1028	1019	FX8
	1547	1792	1974	2111	2215	2293	2348	2385	2406	2414	2411	2399	2378	FX9
35	28	36	41	46	49	51	53	54	55	56	56	56	55	FX5
	63	82	94	104	111	117	121	124	125	126	127	127	126	FX6
	102	133	154	169	181	190	196	201	204	206	206	206	205	FX6.5
	204	265	307	339	362	380	393	402	408	411	413	412	410	FX7
	322	418	484	533	570	598	618	633	642	648	650	649	645	FX7.5
	506	656	761	838	896	940	972	995	1010	1018	1021	1019	1014	FX8
	1180	1531	1775	1955	2090	2192	2267	2321	2356	2376	2382	2379	2365	FX9
30		27	35	41	45	48	50	52	53	54	54	55	54	FX5
		61	80	93	102	109	115	119	121	123	124	124	124	FX6
		99	130	151	166	178	186	193	197	200	202	202	202	FX6.5
		199	260	302	333	356	373	385	394	400	403	404	403	FX7
		313	409	475	524	560	587	607	621	630	635	637	635	FX7.5
		492	643	747	823	880	923	954	976	990	998	1000	998	FX8
	1148	1500	1743	1921	2054	2153	2226	2277	2310	2328	2334	2329	FX9	

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R22 Capacity (kW)													Valve type
	Evaporating temperature (°C)													
	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	
65	49	51	53	54	55	55	56	56	56	56	55	55	54	FX5
	109	114	117	120	122	123	124	125	124	124	123	122	120	FX6
	178	186	192	197	200	202	204	204	204	203	202	200	197	FX6.5
	366	382	394	404	410	415	418	419	419	417	414	410	405	FX7
	563	587	606	621	632	639	643	645	644	641	637	630	623	FX7.5
	886	924	954	977	994	1005	1012	1014	1013	1009	1002	992	980	FX8
	2065	2154	2223	2277	2316	2342	2358	2364	2361	2351	2334	2311	2283	FX9
60	47	49	52	53	54	55	56	56	56	56	56	56	55	FX5
	104	110	115	119	121	123	125	125	126	126	125	124	123	FX6
	171	181	188	194	199	202	204	206	206	206	205	203	201	FX6.5
	351	371	386	399	408	415	419	422	423	422	420	417	413	FX7
	540	571	595	613	628	638	645	649	650	650	647	642	636	FX7.5
	850	898	936	965	988	1004	1015	1021	1023	1022	1017	1010	1000	FX8
	1981	2092	2180	2249	2301	2340	2365	2380	2385	2382	2371	2354	2330	FX9
55	44	47	50	52	53	55	55	56	56	56	56	56	56	FX5
	98	105	111	115	119	122	124	125	126	126	126	125	124	FX6
	160	172	181	189	195	199	203	205	206	206	206	205	203	FX6.5
	328	353	373	388	400	409	416	420	422	423	422	420	417	FX7
	505	543	573	597	615	629	640	646	650	651	650	647	642	FX7.5
	794	854	902	939	968	990	1006	1017	1023	1024	1023	1018	1010	FX8
	1850	1990	2101	2189	2257	2308	2345	2369	2383	2387	2383	2371	2354	FX9
50	39	44	47	50	52	53	54	55	56	56	56	56	56	FX5
	88	97	105	110	115	119	121	123	124	125	125	125	124	FX6
	144	159	171	181	188	194	198	202	204	205	205	204	203	FX6.5
	296	327	352	371	387	399	407	414	418	420	421	420	417	FX7
	455	503	541	572	595	613	627	636	643	646	647	646	642	FX7.5
	715	792	852	899	936	965	986	1001	1011	1017	1018	1016	1011	FX8
	1667	1846	1985	2096	2182	2248	2298	2334	2357	2369	2372	2367	2355	FX9
45	33	39	43	46	49	51	53	54	55	55	55	55	55	FX5
	75	87	96	104	109	114	117	120	122	123	123	123	123	FX6
	122	142	158	170	179	187	192	196	199	201	202	202	202	FX6.5
	251	292	324	349	368	383	394	403	409	413	415	415	414	FX7
	386	450	499	536	566	589	607	620	629	635	638	639	637	FX7.5
	607	708	784	844	891	927	955	975	990	999	1004	1005	1002	FX8
	1414	1649	1828	1967	2076	2160	2225	2273	2307	2329	2340	2342	2336	FX9
40	25	33	38	43	46	48	50	52	53	54	54	54	54	FX5
	55	73	85	95	102	108	112	115	118	120	121	121	121	FX6
	90	120	140	155	167	176	184	189	193	196	198	198	198	FX6.5
	186	245	287	319	343	362	377	388	396	402	405	407	407	FX7
	286	377	442	490	528	557	580	597	609	618	624	626	627	FX7.5
	449	594	695	772	831	877	912	939	959	973	981	986	986	FX8
	1047	1384	1620	1798	1936	2043	2126	2188	2235	2267	2287	2297	2298	FX9
35		24	32	37	42	45	47	49	51	52	52	53	53	FX5
		53	71	83	93	100	105	110	113	115	117	118	118	FX6
		86	116	136	152	163	173	179	185	189	191	193	193	FX6.5
		177	238	280	311	336	354	368	379	387	392	396	397	FX7
		273	366	431	479	516	545	567	583	595	604	609	611	FX7.5
		429	576	678	754	812	857	892	918	937	950	958	961	FX8
		1000	1342	1580	1757	1893	1998	2078	2139	2183	2214	2232	2240	FX9
30			22	31	36	40	43	46	48	49	50	51	51	FX5
			50	68	81	90	97	102	106	110	112	113	114	FX6
			81	111	132	147	159	168	174	179	183	186	187	FX6.5
			167	229	271	302	326	344	358	368	376	381	384	FX7
			256	352	417	465	501	529	551	567	578	586	590	FX7.5
			404	554	656	731	789	833	866	891	910	922	929	FX8
			940	1290	1528	1704	1838	1941	2019	2078	2120	2148	2165	FX9

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R450A													Valve type
	Capacity (kW)													
	Evaporating temperature (°C)													
	50	40	30	20	15	10	5	0	-5	-10	-15	-20	-30	
80	24	25	26	25	25	24	24	23	22	21	20	19	17	FX5
	56	60	61	60	59	58	56	55	53	51	48	46	41	FX6
	86	91	93	92	90	88	86	83	80	77	74	70	63	FX6.5
	183	195	199	196	193	189	184	178	172	165	158	150	134	FX7
	272	290	295	291	286	280	273	264	255	245	234	223	199	FX7.5
	431	460	468	462	454	445	433	420	405	389	372	354	316	FX8
	1005	1070	1089	1075	1058	1035	1008	977	943	906	866	824	735	FX9
70	21	25	26	27	27	27	26	26	25	25	24	23	21	FX5
	51	59	63	64	64	63	63	61	60	58	57	55	50	FX6
	78	90	96	98	98	97	95	94	92	89	86	83	77	FX6.5
	166	192	205	209	209	207	204	200	196	190	185	178	164	FX7
	246	285	304	310	309	307	303	297	290	283	274	265	244	FX7.5
	391	452	482	492	491	487	481	472	461	449	435	420	387	FX8
	910	1053	1123	1146	1144	1134	1119	1098	1073	1045	1012	978	901	FX9
60	14	21	25	27	27	27	27	27	27	26	26	25	24	FX5
	34	51	59	63	64	65	65	64	63	62	61	59	56	FX6
	52	78	90	96	98	99	99	98	97	95	93	91	86	FX6.5
	112	166	193	206	209	211	211	209	207	203	199	194	183	FX7
	165	246	286	306	311	313	313	310	307	302	295	288	271	FX7.5
	263	391	455	486	493	496	496	493	487	479	469	457	431	FX8
	611	910	1058	1131	1148	1156	1155	1147	1133	1114	1091	1065	1003	FX9
50		13	21	24	25	26	26	27	27	26	26	26	25	FX5
		31	49	58	60	62	63	63	63	63	62	61	59	FX6
		48	75	88	92	94	96	96	96	96	95	93	89	FX6.5
		103	160	188	196	201	205	206	206	205	203	199	191	FX7
		152	238	279	291	299	303	306	306	304	301	296	284	FX7.5
		242	377	442	461	474	482	485	485	482	477	470	450	FX8
	563	878	1030	1074	1104	1122	1130	1130	1123	1111	1094	1048	FX9	
40			11	19	21	23	24	25	25	25	25	25	24	FX5
			27	46	51	54	57	58	59	60	60	60	58	FX6
			41	70	77	83	87	89	91	91	92	91	89	FX6.5
			87	149	165	177	185	191	194	195	196	195	190	FX7
			130	221	245	263	275	283	288	290	290	289	282	FX7.5
			206	351	389	417	436	449	457	460	461	458	447	FX8
		479	816	907	971	1015	1045	1063	1072	1073	1067	1041	FX9	
30				8	14	17	19	21	22	23	23	23	23	FX5
				19	33	40	46	49	52	54	55	55	55	FX6
				29	50	62	70	75	79	82	83	84	84	FX6.5
				63	107	132	149	161	169	175	178	180	179	FX7
				93	159	196	221	239	251	259	264	267	266	FX7.5
				148	252	311	351	379	398	411	419	423	422	FX8
			344	586	724	818	883	928	958	976	985	983	FX9	
20							10	14	16	18	19	20	20	FX5
							25	33	39	43	45	47	49	FX6
							37	51	59	65	69	72	74	FX6.5
							80	109	127	139	148	153	159	FX7
							119	162	188	207	219	228	236	FX7.5
							189	256	299	328	348	361	374	FX8
						440	597	697	764	810	841	870	FX9	

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R513A													Valve type
	Capacity (kW)													
	Evaporating temperature (°C)													
	50	40	30	20	15	10	5	0	-5	-10	-15	-20	-30	
80	21	23	23	22	22	21	20	19	18	17	16	15	13	FX5
	51	54	54	53	51	50	48	46	43	41	38	36	30	FX6
	78	82	83	80	78	76	73	70	66	63	59	54	46	FX6.5
	166	176	177	172	168	162	156	149	142	134	125	116	98	FX7
	247	261	263	255	249	241	232	222	210	198	186	173	145	FX7.5
	392	415	417	405	395	383	368	352	334	315	295	274	231	FX8
	913	965	972	944	920	891	857	819	778	734	687	638	537	FX9
70	21	24	25	26	25	25	25	24	23	22	22	21	19	FX5
	49	57	60	61	60	60	58	57	55	53	51	49	44	FX6
	75	87	92	93	92	91	89	87	84	81	78	75	67	FX6.5
	160	185	196	199	197	195	191	186	180	174	167	160	144	FX7
	238	275	291	295	293	289	283	276	268	258	248	237	213	FX7.5
	378	436	462	468	465	458	449	438	425	410	393	376	338	FX8
	880	1015	1077	1089	1082	1067	1046	1020	989	954	916	875	788	FX9
60	14	21	25	26	27	27	27	26	26	25	25	24	22	FX5
	34	51	59	63	64	64	64	63	62	60	59	57	53	FX6
	52	78	90	96	97	97	97	96	94	92	90	87	81	FX6.5
	112	166	193	205	208	208	207	205	202	197	192	186	173	FX7
	166	247	286	304	308	309	308	304	299	293	285	277	257	FX7.5
	263	392	454	483	489	490	488	483	475	465	453	439	408	FX8
	613	912	1057	1124	1138	1142	1136	1124	1106	1082	1054	1022	950	FX9
50		14	21	25	26	26	27	27	27	27	26	26	24	FX5
		33	50	59	61	63	64	64	64	63	62	61	58	FX6
		50	77	90	94	96	97	98	97	97	95	93	89	FX6.5
		106	165	192	200	205	208	209	208	206	203	200	190	FX7
		158	244	285	297	305	309	310	309	306	302	296	282	FX7.5
		251	388	453	471	483	490	492	491	486	479	470	447	FX8
		584	903	1055	1098	1125	1141	1146	1143	1132	1116	1095	1041	FX9
40			12	20	22	24	25	26	26	26	26	26	25	FX5
			29	48	53	57	59	61	62	62	62	61	60	FX6
			44	73	81	87	90	93	94	95	95	94	91	FX6.5
			95	157	173	185	193	198	201	203	202	201	195	FX7
			140	233	257	275	287	294	299	301	300	298	289	FX7.5
			223	369	408	436	455	467	474	477	476	472	458	FX8
			518	860	951	1015	1059	1088	1104	1111	1109	1100	1067	FX9
30				10	15	18	21	22	23	24	24	25	24	FX5
				23	36	44	49	53	55	57	58	58	58	FX6
				35	55	67	75	80	84	87	88	89	88	FX6.5
				75	118	143	160	172	180	186	189	190	189	FX7
				111	175	212	238	255	267	275	280	282	280	FX7.5
				176	277	337	377	405	424	437	444	447	444	FX8
			410	645	784	878	944	988	1018	1035	1042	1035	FX9	
20						5	12	16	18	20	21	22	22	FX5
						12	29	38	43	47	50	51	53	FX6
						19	45	58	66	72	76	78	80	FX6.5
						40	96	123	141	153	162	167	172	FX7
						59	142	183	210	228	240	248	255	FX7.5
						94	225	290	332	361	381	394	405	FX8
						219	524	676	774	841	887	917	943	FX9

Electronic Expansion Valves FX Series

Quick selection (included 1.5 bar pressure drop for liquid line components and distributor)

Condensing temperature (°C)	R1234ze													Valve type
	Capacity (kW)													
	Evaporating temperature (°C)													
	50	40	30	20	15	10	5	0	-5	-10	-15	-20	-30	
80	28	30	30	30	29	28	28	27	26	24	23	22	19	FX5
	67	71	72	71	69	67	65	63	61	58	55	52	46	FX6
	102	108	110	108	106	103	100	96	93	88	84	80	70	FX6.5
	218	232	235	230	226	220	214	206	198	189	180	170	150	FX7
	324	344	348	341	335	327	317	306	294	281	267	253	222	FX7.5
	514	546	552	542	531	518	503	485	466	446	424	401	353	FX8
	1197	1271	1287	1262	1237	1207	1171	1130	1086	1037	987	933	821	FX9
70	25	29	31	31	31	31	30	30	29	28	27	26	24	FX5
	59	69	73	74	74	73	72	70	69	67	64	62	56	FX6
	90	105	112	113	113	112	110	108	105	102	98	94	86	FX6.5
	192	224	238	242	241	239	235	230	224	217	210	202	184	FX7
	285	332	354	360	358	354	349	341	332	322	311	299	273	FX7.5
	453	527	562	571	568	562	553	541	527	511	494	475	434	FX8
	1055	1228	1308	1329	1324	1310	1288	1261	1228	1191	1150	1106	1010	FX9
60	15	24	29	31	31	31	31	31	30	30	29	28	26	FX5
	36	58	68	73	74	74	74	73	72	71	69	67	63	FX6
	55	88	103	111	112	113	113	112	110	108	105	102	96	FX6.5
	118	188	221	237	240	241	241	238	235	231	225	219	205	FX7
	175	279	328	351	356	358	357	354	349	342	334	325	304	FX7.5
	277	443	521	557	565	568	567	562	553	543	530	516	482	FX8
	645	1032	1213	1297	1316	1323	1319	1308	1289	1264	1234	1201	1123	FX9
50		13	23	27	29	29	30	30	30	30	29	29	28	FX5
		31	54	65	68	70	71	71	71	71	70	69	65	FX6
		47	83	99	104	106	108	109	109	108	107	105	100	FX6.5
		101	178	212	221	228	231	233	232	231	228	224	213	FX7
		150	264	314	328	338	343	345	345	342	338	332	317	FX7.5
		239	418	498	521	536	545	548	547	543	536	527	502	FX8
		556	974	1161	1214	1248	1268	1276	1275	1265	1249	1227	1170	FX9
40			10	21	23	25	27	27	28	28	28	28	27	FX5
			23	49	56	60	63	65	66	67	67	66	65	FX6
			35	75	85	92	96	99	101	102	102	101	98	FX6.5
			75	161	182	196	206	212	216	218	218	217	211	FX7
			111	239	269	291	306	315	321	323	324	321	312	FX7.5
			176	379	428	462	485	500	509	513	513	510	496	FX8
			410	882	996	1075	1129	1165	1186	1196	1196	1188	1155	FX9
30				1	13	18	21	22	24	25	25	25	25	FX5
				3	31	42	49	53	57	59	60	60	60	FX6
				5	48	64	74	81	86	89	91	92	92	FX6.5
				10	102	137	159	174	184	191	195	197	197	FX7
				15	152	203	236	259	274	284	290	293	292	FX7.5
				25	241	323	375	410	434	450	460	465	463	FX8
				57	561	752	873	955	1012	1049	1071	1082	1078	FX9
20							7	13	17	19	20	21	22	FX5
							18	32	40	45	48	50	52	FX6
							27	49	60	68	73	77	80	FX6.5
							58	104	129	145	156	164	170	FX7
							86	154	192	216	232	243	253	FX7.5
							136	245	304	342	368	385	401	FX8
							317	570	708	798	858	897	935	FX9

Electronic Expansion Valves FX Series

Bi-flow application

FX valves are able to be operated in Bi-flow direction such as reversible heat pump with following consideration:

Valve	Max. Operating differential (bar)		Capacity	
	Normal flow direction	Reverse flow direction	Normal flow direction	Reverse flow direction
FX5	40	30	Nominal capacity on page 1	The same capacity
FX6	35	30		
FX6.5	35	30		

Technical data

Max. working pressure PS	FX5-8: 46 bar FX9: 35 bar	Compatibility (not released for use with inflammable refrigerants)	R134a, R410A, R22, R407C R513A, R1234ze, R450A Mineral and POE lubricants
MOPD (maximum operating pressure differential)	FX5: 40 bar FX6-8: 35 bar FX9: 28 bar	Humidity	5...95% r.H.
Protection acc. to IEC 529, DIN 40050	IP67 with EMERSON EXV-Mxx plug and cable assembly	Connections	ODF Copper
Vibration resistance	4g at 10...200Hz	Package and delivery (individual)	without electrical connector
Ambient temperature	-40...+55°C	Markings	 FX5/6/6.5: not required FX7/7.5/8/9: required, Cat I, Module A UL (pending)
Storage temperature	-40...+70°C		
Medium inlet temperature TS	-35...+75°C		
Evaporating temperature	-35...+40°C		

Electrical data

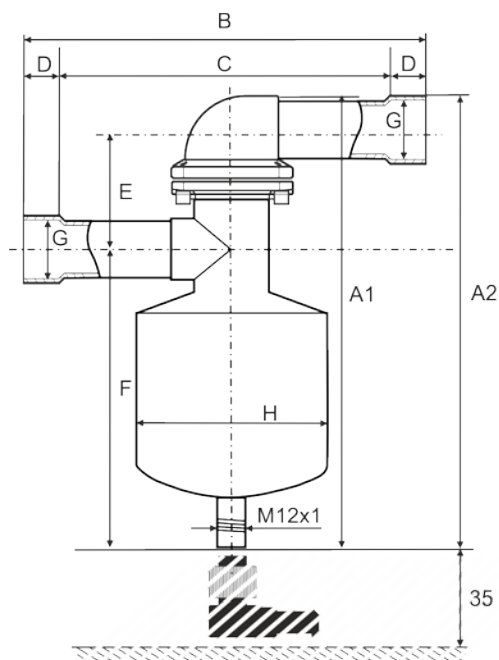
Stepper motor type	Bi-polar, phase current (constant current)	Total number of steps	FX5-7: 2400 full steps FX7.5: 2500 full steps FX8: 2600 full steps FX9: 3200 full steps
Electrical connection	4 pin terminal via plug	Step mode	Full step, half step or micro step
Supply Voltage	24 VDC (nominal)	Stepping rate	330 Hz
Driver supply voltage range	18...36 VDC	Winding resistance per phase	3.4 Ohm ±10%
Phase current, operating	FX5-9: 800 mA	Reference position	Mechanical stop at fully close position
Holding current	FX5/6/6.5: 500 mA FX7/7.5: 250 mA FX8/9: 500 mA	Full travel time	FX5-7: 7.3 seconds FX7.5: 7.6 seconds FX8: 7.9 seconds FX9: 9.7 seconds

Electronic Expansion Valves FX Series

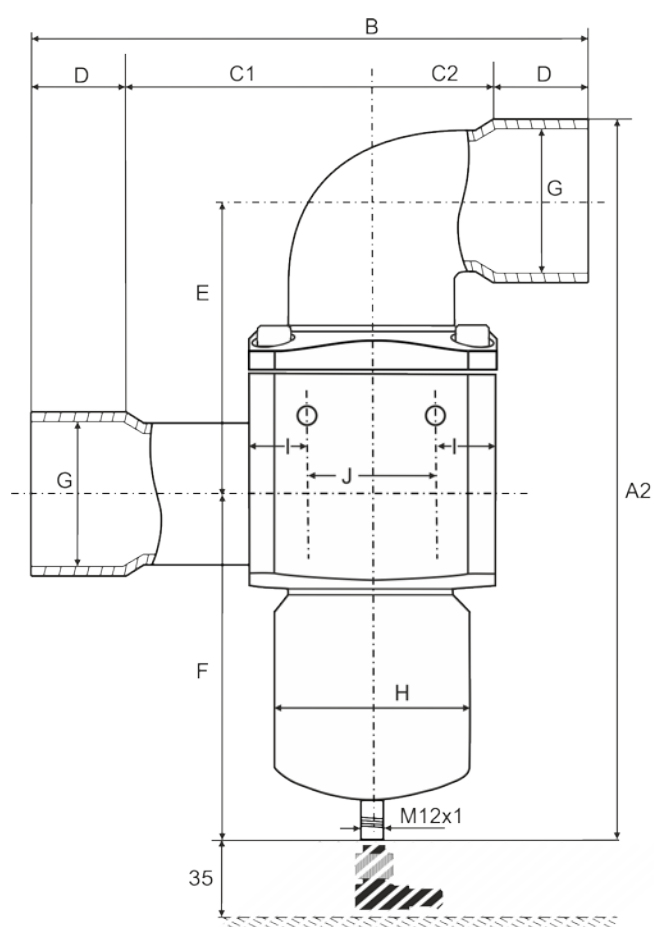
Dimensions (mm)

Type	Part. No	A		B	C	D	E	F	G	H	I	J
		A1	A2									
FX5-U07	801336	156	-	164	132	16	42	102	Ø 22 7/8" ODF	60	-	-
FX6-M28	801338	-	159	164	126	19	42	102	Ø 28	60	-	-
FX6-I09	801337	-	159	164	126	19	42	102	1-1/8" ODF	60	-	-
FX6.5-M28	801340	-	159	164	126	19	42	102	Ø28	60	-	-
FX6.5-I09	801339	-	159	164	126	19	42	102	1-1/8" ODF	60	-	-
FX7-U11	801341	-	167	177	129	24	45	103	Ø35 1-3/8" ODF	60	-	-
FX7.5-U11	801342	191	-	177	129	24	67	104	Ø 35 1-3/8" ODF	60	-	-
FX8-M42	801343	228	-	208	152	28	86	118	Ø 42	60	-	-
FX8-I13	801344	228	-	208	152	28	86	118	1-5/8" ODF	60	-	-
FX9-U17		-	270	189	C1: 86 C2: 35	34	116	125	Ø 54 2-1/8" ODF	60	25	40

FX5, FX6, FX6.5, FX7, FX7.5 & FX8



FX9



FX5-9_TB_EN_1801_R04.docx

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