

Application guidelines

Danfoss Scroll for Refrigeration **MLZ Evolution A** **(with POE Oil)**

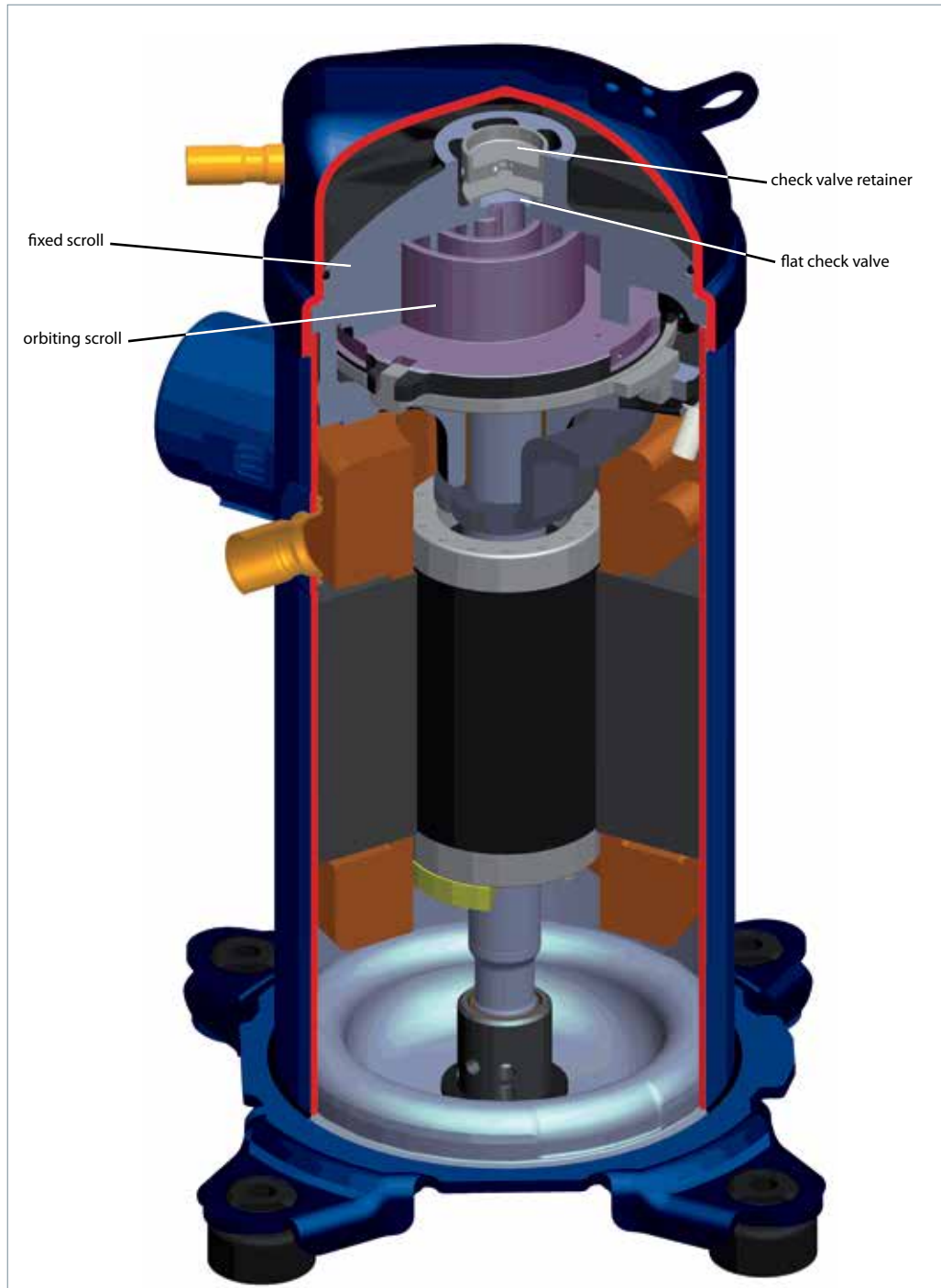
50-60 Hz - R404A - R507 - R134a - R22 - R407A - R407F - R448A - R449A - R452A - R513A



With its unique scroll design and manufacturing process flexibility, the new Danfoss MLZ refrigeration compressor offers a highly efficient solution for demanding refrigeration applications.

This new family of refrigeration compressors includes 12 sizes of medium temperature

scroll compressors designed for commercial refrigeration applications. These compressors are engineered for refrigeration, and offer cooling capacity from 3.4 to 21kW (2 to 10HP) at common voltages and frequencies as well as any of the common refrigerants (R404A - R507 - R134a - R22 - R407A - R407F - R448A - R449A - R452A - R513A).



Thanks to its dedicated refrigeration design, the MLZ scroll compressor delivers a number of powerful advantages. With its high efficiency motor and optimised scroll design it reduces

energy cost in normal operating conditions and delivers high capacity and an optimised pressure ratio for refrigeration applications.

Nomenclature

Type	Size	Motor	Features	Evolution
MLZ	021	T 4 L	P 9	A

Application
M: Medium temperature refrigeration

Family, Refrigerant
LZ(A): R404A - R507 - R22 - R134a - R407A - R407F - R448A - R449A - R452A - R513A



Nominal capacity
In thousand Btu/h at 60Hz, ARI, MBP conditions

Model variation
T: Design optimised for refrigeration

Index
- with PVE oil
A with POE oil

Other features

	Oil sight glass	Oil equalisation	Oil drain	LP gauge port	Gas equalisation port
9	Threaded	None	Schrader	None	None

Tubing and electrical connections
P: Brazed connections, spade terminals  Spade terminals
C: Brazed connections, screw terminals
T: Rotolock connections, spade terminals
Q: Rotolock connections, screws terminals  Screw terminals

Motor protection
L: Internal motor protection

Motor voltage code
1: 208-230V/1~/60Hz
2: 200-220V/3~/50Hz & 208-230V/3~/60Hz
4: 380-415V/3~/50Hz & 460V/3~/60Hz
5: 220-240V/1~/50Hz
7: 575V/ 3~/60Hz
9: 380V/3~/60Hz

Application Guidelines Technical specifications

50Hz

Model	HP	Nominal cooling capacity *		Power input *	Efficiency *		Swept volume		Displacement		Oil charge		Net weight (with oil)		
		W	Btu/h		kW	COP	EER	cm ³ /rev	cu.in/rev	m ³ /h	cu.ft/h	Litres	oz	kg	lb
				W/W											
R404A**	MLZ015	2	3300	11300	1.75	1.89	6.45	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4500	15400	2.16	2.06	7.03	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4700	16000	2.27	2.08	7.10	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5800	19800	2.90	2.00	6.83	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	7100	24200	3.35	2.11	7.20	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	8400	28700	3.86	2.19	7.47	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	9500	32400	4.72	2.02	6.89	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	10200	34800	4.81	2.11	7.20	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	11100	37900	5.17	2.14	7.30	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	13000	44400	6.08	2.13	7.27	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	15100	51500	7.01	2.15	7.34	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	17300	59000	7.93	2.18	7.44	162.4	9.91	28.3	999	2.7	91	45	99	
R134a***	MLZ015	2	2000	6800	1.02	1.95	6.66	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	2500	8500	1.28	1.98	6.76	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	2700	9200	1.33	2.04	6.96	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	3300	11300	1.62	2.06	7.03	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	4000	13700	1.93	2.09	7.13	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	4700	16000	2.34	2.02	6.89	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	5300	18100	2.74	1.95	6.66	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	5900	20100	2.69	2.17	7.41	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	6200	21200	2.91	2.14	7.30	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	7400	25300	3.61	2.06	7.03	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	8600	29400	4.10	2.10	7.17	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	9600	32800	4.67	2.06	7.03	162.4	9.91	28.3	999	2.7	91	45	99	
R448A****	MLZ015	2	3200	11000	1.68	1.91	6.52	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4200	14300	2.11	1.99	6.79	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4400	15000	2.23	1.97	6.73	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5500	18700	2.78	1.97	6.72	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	6600	22500	3.17	2.08	7.09	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	7800	26600	3.64	2.14	7.30	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	9100	31000	4.55	1.99	6.81	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	9700	33000	4.58	2.11	7.21	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	10400	35500	5.06	2.06	7.02	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	12200	41700	5.57	2.19	7.48	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	14200	48500	6.75	2.11	7.21	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	15200	51700	7.61	1.99	6.80	162.4	9.91	28.3	999	2.7	91	45	99	
R22	MLZ015	2	3300	11263	1.53	2.15	7.34	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4300	14676	1.87	2.30	7.85	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4600	15700	2.02	2.27	7.75	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5700	19454	2.43	2.33	7.95	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	6800	23208	2.93	2.33	7.95	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	8100	27645	3.45	2.34	7.99	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	9100	31058	4.23	2.15	7.34	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	9300	31741	4.14	2.24	7.65	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	10600	36177	4.53	2.33	7.95	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	12300	41980	5.29	2.33	7.95	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	14100	48123	5.94	2.38	8.12	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	16600	56655	6.96	2.38	8.12	162.4	9.91	28.3	999	2.7	91	45	99	

* at EN12900 conditions: To= -10°C(14°F), Tc= 45°C (113°F), RGT= 20°C (68°F), SC= 0K

** R507 performance data are nearly identical to R404A performance data

***: To= -10°C(14°F), Tc= 45°C (113°F), SH= 10K(18°F), SC= 0K

****R449A performance data are nearly identical to R448A performance data

All performance test data after run-in 72hrs. Motor voltage code 4: 400V/3~/50Hz, MLZ042: Motor voltage code 5: 220-240V/1~/50Hz

Application Guidelines Technical specifications

50Hz

Model	HP	Nominal cooling capacity *		Power input *	Efficiency *		Swept volume		Displacement		Oil charge		Net weight (with oil)		
					COP	EER									
		W	Btu/h	kW	W/W	Btu/h/W	cm ³ /rev	cu.in/rev	m ³ /h	cu.ft/h	Litres	oz	kg	lb	
R407A	MLZ015	2	3100	10580	1.55	2.00	6.83	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4000	13652	2.04	1.96	6.69	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4200	14334	2.21	1.91	6.52	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5300	18089	2.71	1.96	6.69	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	6500	22184	2.99	2.17	7.41	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	7500	25597	3.47	2.16	7.37	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	8600	29352	4.53	1.9	6.48	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	9100	31058	4.55	2.01	6.86	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	10000	34130	5.01	2.00	6.83	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	11500	39249	5.69	2.02	6.89	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	13400	45734	6.78	1.98	6.76	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	14700	50171	7.51	1.96	6.69	162.4	9.91	28.3	999	2.7	91	45	99	
R407F	MLZ015	2	3300	11263	1.66	2.00	6.83	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4300	14676	2.19	1.96	6.69	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4500	15358	2.37	1.91	6.52	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5700	19454	2.90	1.96	6.69	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	6900	23549	3.20	2.17	7.41	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	8000	27304	3.72	2.16	7.37	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	9200	31399	4.85	1.9	6.48	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	9800	33447	4.87	2.01	6.86	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	10800	36860	5.37	2.01	6.86	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	12300	41980	6.09	2.02	6.89	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	14400	49147	7.26	1.99	6.79	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	15800	53925	8.04	1.96	6.69	162.4	9.91	28.3	999	2.7	91	45	99	
R452A	MLZ015	2	3400	11500	1.71	1.97	6.72	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	4300	14700	2.17	1.99	6.80	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	4600	15700	2.27	2.02	6.89	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	5700	29400	2.81	2.02	6.90	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	6800	23400	3.27	2.10	7.18	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	8000	27300	3.81	2.10	7.18	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	9300	31700	4.84	1.92	6.56	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	10100	34300	4.81	2.09	7.14	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	11000	37500	5.17	2.12	7.25	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	12900	44000	5.89	2.19	7.48	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	15100	51500	7.15	2.11	7.20	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	16200	55200	7.94	2.04	6.95	162.4	9.91	28.3	999	2.7	91	45	99	
R513A	MLZ015	2	2100	7200	1.09	1.93	6.58	33.8	2.06	5.9	208	1.1	37	31	68
	MLZ019	2.5	2700	9300	1.37	1.98	6.75	43.5	2.65	7.6	268	1.1	37	31	68
	MLZ021	3	2900	9900	1.45	1.99	6.78	46.2	2.82	8.0	283	1.1	37	31	68
	MLZ026	3.5	3600	12200	1.78	2.01	6.85	57.1	3.48	9.9	350	1.1	37	31	68
	MLZ030	4	4400	14900	2.04	2.14	7.29	68.8	4.20	12.0	424	1.6	54	37	81
	MLZ038	5	5100	17500	2.34	2.18	7.45	81.0	4.94	14.1	498	1.6	54	37	81
	MLZ042	5.5	5900	20200	3.00	1.98	6.74	93.1	5.68	16.2	572	1.6	54	37	81
	MLZ045	6	6400	21700	2.96	2.15	7.33	98.6	6.02	17.2	607	1.6	54	37	81
	MLZ048	7	6800	23100	3.21	2.11	7.19	107.5	6.56	18.7	660	1.6	54	37	81
	MLZ058	7.5	8000	27300	3.64	2.20	7.51	126.0	7.69	21.9	773	2.7	91	44	97
	MLZ066	9	9300	31800	4.44	2.10	7.17	148.8	9.08	25.9	915	2.7	91	45	99
MLZ076	10	10000	34100	5.13	1.95	6.65	162.4	9.91	28.3	999	2.7	91	45	99	

* at EN12900 conditions: To= -10°C(14°F), Tc= 45°C(113°F), RGT= 20°C(68°F), SC= 0K

Only motor code 4, code 5 of MLZ are qualified with R407A/R407F

All performance test data after run-in 72hrs

Motor voltage code 4: 400V/3~/50Hz

MLZ042: Motor voltage code 5: 220-240V/1~/50Hz

Application Guidelines Technical specifications

60Hz

Model	HP	Nominal cooling capacity *		Power input *	Efficiency *		Swept volume		Displacement		Oil charge		Net weight (with oil)		
		W	Btu/h		kW	COP	EER	cm ³ /rev	cu.in./rev	m ³ /h	cu.ft/h	Litres	oz	kg	lb
					W/W	Btu/h/W									
R404A **	MLZ015	2	4100	14000	2.10	1.94	6.62	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	5500	18800	2.58	2.11	7.20	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5800	19800	2.74	2.13	7.27	46.2	2.82	9.7	343	1.1	37	31	68
	MLZ026	3.5	7200	24600	3.44	2.10	7.17	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	8500	29000	3.90	2.18	7.44	68.8	4.20	14.4	509	1.6	54	37	81
	MLZ038	5	10200	34800	4.70	2.18	7.44	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ042	5.5	11800	40300	5.73	2.07	7.06	93.1	5.68	19.6	692	1.6	54	37	81
	MLZ045	6	12400	42300	5.64	2.19	7.47	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	13500	46100	6.15	2.20	7.51	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	15700	53600	7.35	2.14	7.30	126.0	7.69	26.4	932	2.7	91	44	97
	MLZ066	9	18400	62800	8.40	2.18	7.44	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	20900	71300	9.59	2.18	7.44	162.4	9.91	34.1	1204	2.7	91	45	99	
R134a ***	MLZ015	2	2400	8200	1.19	2.05	7.00	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	3100	10600	1.53	2.03	6.93	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	3300	11300	1.58	2.10	7.17	46.2	2.82	9.7	343	1.1	37	31	68
	MLZ026	3.5	4100	14000	1.91	2.15	7.34	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	5000	17100	2.35	2.11	7.20	68.8	4.20	14.4	509	1.6	54	37	81
	MLZ038	5	5800	19800	2.80	2.09	7.13	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ042	5.5	6500	22200	3.33	1.94	6.62	93.1	5.68	19.6	692	1.6	54	37	81
	MLZ045	6	7100	24200	3.32	2.14	7.30	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	7600	25900	3.54	2.14	7.30	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	9100	31100	4.28	2.13	7.27	126.0	7.69	26.4	932	2.7	91	44	97
	MLZ066	9	10400	35500	4.85	2.15	7.34	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	11700	39900	5.61	2.09	7.13	162.4	9.91	34.1	1204	2.7	91	45	99	
R448A ****	MLZ015	2	3800	13100	1.96	1.96	6.69	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	5100	17400	2.48	2.06	7.02	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5400	18400	2.62	2.06	7.03	46.2	2.82	9.7	343	1.1	37	31	68
	MLZ026	3.5	6800	23200	3.21	2.12	7.23	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	6600	22500	3.17	2.08	7.09	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	8200	28100	3.72	2.22	7.56	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ042	5.5	11000	37600	5.55	1.99	6.79	93.1	5.68	19.6	692	1.6	54	37	81
	MLZ045	6	11600	39500	5.57	2.08	7.10	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	12800	43800	5.93	2.16	7.38	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	15100	51500	6.65	2.27	7.74	126.0	7.69	26.5	936	2.7	91	44	97
	MLZ066	9	17400	59300	8.05	2.16	7.36	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	18700	63800	8.88	2.11	7.19	162.4	9.91	34.1	1204	2.7	91	45	99	
R22	MLZ015	2	3900	13311	1.74	2.26	7.71	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	5200	17747	2.22	2.37	8.09	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5600	19113	2.36	2.36	8.05	46.2	2.82	9.7	343	1.1	37	31	68
	MLZ026	3.5	7000	23891	2.93	2.39	8.16	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	8200	27986	3.46	2.36	8.05	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	9600	32765	4.06	2.36	8.05	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ042	5.5	10900	37201	5.00	2.18	7.44	93.1	5.68	19.6	692	1.6	54	37	81
	MLZ045	6	11700	39932	4.91	2.38	8.12	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	12900	44027	5.36	2.4	8.19	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	14900	50853	6.34	2.34	7.99	126.0	7.69	26.5	936	2.7	91	44	97
	MLZ066	9	17000	58020	7.14	2.38	8.12	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	20100	68601	8.40	2.39	8.16	162.4	9.91	34.1	1204	2.7	91	45	99	

* at EN12900 conditions: To= -10°C(14°F), Tc= 45°C(113°F), RGT= 20°C(68°F), SC= 0K

** R507 performance data are nearly identical to R404A performance data

***: To= -10°C(14°F), Tc= 45°C(113°F), SH= 10K(18°F), SC= 0K

****R449A performance data are nearly identical to R448A performance data

All performance test data after run-in 72hrs

Motor voltage code 4: 460V/3~/60Hz

MLZ042: Motor voltage code 1: 208-230V/1~/60Hz

Application Guidelines Technical specifications

60Hz

Model	HP	Nominal cooling capacity *		Power input *	Efficiency *		Swept volume		Displacement		Oil charge		Net weight (with oil)		
		W	Btu/h		COP	EER	cm ³ /rev	cu.in/rev	m ³ /h	cu.ft/h	Litres	oz	kg	lb	
				kW	W/W	Btu/h/W									
R407A	MLZ015	2	3800	12969	1.85	2.04	6.96	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	4900	16724	2.40	2.06	7.03	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5300	18089	2.63	2.01	6.86	46.2	2.82	9.7	343	1.1	37	31	68
	MLZ026	3.5	6400	21843	3.10	2.07	7.06	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	7900	26962	3.52	2.25	7.68	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	9200	31399	4.10	2.24	7.65	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ045	6	11200	38225	5.37	2.09	7.13	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	12200	41638	6.01	2.03	6.93	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	14300	48805	6.68	2.14	7.30	126.0	7.69	26.5	936	2.7	91	44	97
	MLZ066	9	16700	56997	7.89	2.12	7.24	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	18100	61775	8.64	2.09	7.13	162.4	9.91	34.1	1204	2.7	91	45	99	
R407F	MLZ015	2	4100	13993	1.98	2.05	7.00	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	5300	18089	2.57	2.06	7.03	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5700	19454	2.81	2.01	6.86	46.2	2.82	9.70	343	1.1	37	31	68
	MLZ026	3.5	6900	23549	3.32	2.08	7.10	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	8500	29010	3.77	2.26	7.71	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	9800	33447	4.38	2.24	7.65	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ045	6	12000	40956	5.75	2.09	7.13	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	13100	44710	6.44	2.04	6.96	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	15300	52218	7.15	2.14	7.30	126.0	7.69	26.5	936	2.7	91	44	97
	MLZ066	9	18000	61433	8.45	2.13	7.27	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	19400	66212	9.25	2.09	7.13	162.4	9.91	34.1	1204	2.7	91	45	99	
R452A	MLZ015	2	4100	13900	2.05	1.99	6.78	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	5200	17900	2.57	2.03	6.94	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	5500	18800	2.70	2.05	6.99	46.2	2.82	9.70	343	1.1	37	31	68
	MLZ026	3.5	6800	23300	3.34	2.04	6.97	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	8400	28700	3.94	2.14	7.29	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	9800	33300	4.55	2.15	7.34	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ042	5.5	11400	38900	5.68	2.01	6.85	93.1	5.68	19.6	692	1.6	54	37	81
	MLZ045	6	12000	41000	5.71	2.11	7.18	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	13300	45200	6.24	2.13	7.26	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	15500	53000	7.09	2.19	7.48	126.0	7.69	26.5	936	2.7	91	44	97
MLZ066	9	18500	63100	8.42	2.20	7.50	148.8	9.08	31.3	1105	2.7	91	45	99	
MLZ076	10	19800	67600	9.26	2.14	7.30	162.4	9.91	34.1	1204	2.7	91	45	99	
R513A	MLZ015	2	2500	8600	1.32	1.91	6.52	33.8	2.06	7.1	251	1.1	37	31	68
	MLZ019	2.5	3300	11200	1.66	1.98	6.75	43.5	2.65	9.1	321	1.1	37	31	68
	MLZ021	3	3500	11900	1.75	2.00	6.81	46.2	2.82	9.70	343	1.1	37	31	68
	MLZ026	3.5	4300	14800	2.12	2.04	6.98	57.1	3.48	12.0	424	1.1	37	31	68
	MLZ030	4	5300	17900	2.47	2.13	7.28	68.8	4.20	14.5	512	1.6	54	37	81
	MLZ038	5	6200	21300	2.89	2.16	7.37	81.0	4.94	17.0	600	1.6	54	37	81
	MLZ045	6	7600	25800	3.65	2.07	7.07	98.6	6.02	20.7	731	1.6	54	37	81
	MLZ048	7	8300	28200	3.90	2.12	7.24	107.5	6.56	22.6	798	1.6	54	37	81
	MLZ058	7.5	9600	32900	4.40	2.19	7.48	126.0	7.69	26.5	936	2.7	91	44	97
	MLZ066	9	11400	38800	5.15	2.21	7.53	148.8	9.08	31.3	1105	2.7	91	45	99
MLZ076	10	12000	41100	5.96	2.02	6.90	162.4	9.91	34.1	1204	2.7	91	45	99	

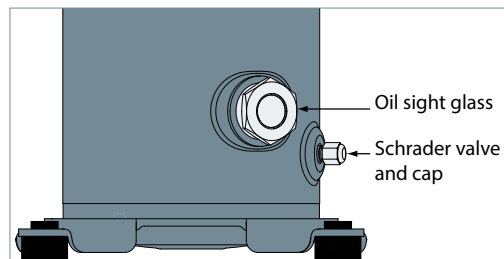
* at EN12900 conditions: To= -10°C(14°F), Tc= 45°C(113°F), RGT= 20°C(68°F), SC= 0K
 Only motor code 4, code 5 of MLZ are qualified with R407A/R407F
 All performance test data after run-in 72hrs
 Motor voltage code 4: 460V/3~/60Hz
 MLZ042: Motor voltage code 1: 208-230V/1~/60Hz

Application Guidelines

Dimensions

Oil sight glass

MLZ scroll compressors come equipped with a threaded oil sight glass with 1"1/8 - 18 UNEF connection. It can be used for a visual check of the oil amount and condition or it may be replaced by an accessory oil management device. The oil level must be visible in the sight glass during operation.
Torque requirement= 52.5 ±2.5Nm (38.7±1.8lb.ft)



Schrader

The oil fill and drain connection and gauge port is a 1/4" male flare connector incorporating a schrader valve.
Torque requirements:
Schrader valve core: 0.6 ±0.2Nm (0.44±0.14lb.ft)
Schrader valve cover: 14.5 ±1Nm (10.7±0.7lb.ft)

Suction and discharge connections

MLZ scroll compressors are factory delivered with brazed connections only. Dedicated rotolock

adaptors and adaptor sets are available as accessory.

Compressor models	Brazed connection size		Rotolock adaptor set (①adaptor, ②gasket, ③sleeve, ④nut)			Rotolock adaptor (① adaptor only)
			Rotolock	Solder sleeve ODF	Code Number	Code Number
MLZ 015-019-021-026	Suction	3/4"	1-1/4"	3/4"	120Z0126	120Z0366
	Discharge	1/2"	1"	1/2"		120Z0365
MLZ 030-038-042-045	Suction	7/8"	1-1/4"	7/8"	120Z0127	120Z0367
	Discharge	1/2"	1"	1/2"		120Z0365
MLZ 048	Suction	7/8"	1-1/4"	7/8"	120Z0128	120Z0367
	Discharge	3/4"	1-1/4"	3/4"		120Z0366
MLZ 058-066-076	Suction	1-1/8"	1-3/4"	1-1/8"	120Z0129	120Z0364
	Discharge	7/8"	1-1/4"	7/8"		120Z0367

Tightening torque for rotolock connection: 90Nm ±20 (66.4lb.ft±14.75)

Three phase electrical characteristics

Compressor model		LRA	MCC	Max Oper A	Winding resistance (Ohm)		
		A	A	A	T1-T3	T1-T2	T2-T3
Motor voltage code 2 200-220V / 3ph / 50Hz 208-230V / 3ph / 60Hz	MLZ015T2	60	14.5	9.9	1.23	1.67	1.67
	MLZ019T2	95	20.0	13.3	0.87	1.18	1.18
	MLZ021T2	95	20.0	13.6	0.87	1.18	1.18
	MLZ026T2	95	22.0	16.6	0.87	1.18	1.18
	MLZ030T2	120	26.0	19.7	0.67	0.67	0.68
	MLZ038T2	123	26.0	23.5	0.60	0.60	0.61
	MLZ045T2	170	30.0	28.2	0.48	0.46	0.48
	MLZ048T2	190	37.0	30.6	0.43	0.44	0.43
	MLZ058T2	190	40.0	36.1	0.37	0.37	0.37
	MLZ066T2	235	46.0	40.7	0.32	0.32	0.33
MLZ076T2	235	50.0	47.6	0.32	0.32	0.33	
Motor voltage code 4 380-415V / 3ph / 50Hz 460V / 3ph / 60Hz	MLZ015T4	30	7.0	4.9	5.0	6.7	6.7
	MLZ019T4	45	9.5	6.7	3.4	4.7	4.7
	MLZ021T4	45	9.5	6.8	3.4	4.7	4.7
	MLZ026T4	45	11.0	8.3	3.4	4.7	4.7
	MLZ030T4	60	13.0	9.8	2.6	2.6	2.6
	MLZ038T4	70	15.0	11.7	2.3	2.3	2.4
	MLZ045T4	82	15.0	14.1	1.9	1.9	1.8
	MLZ048T4	87	16.0	15.3	1.7	1.7	1.7
	MLZ058T4	95	20.0	18.1	1.4	1.4	1.4
	MLZ066T4	110	24.0	20.3	1.3	1.3	1.3
MLZ076T4	140	25.0	23.9	1.1	1.1	1.1	
Motor voltage code 7 575V / 3ph / 60Hz	MLZ015T7	26	5.5	4.0	7.8	10.6	10.6
	MLZ019T7	38	7.0	5.4	5.4	7.3	7.3
	MLZ021T7	38	8.0	5.5	5.4	7.3	7.3
	MLZ026T7	38	9.0	6.0	5.4	7.3	7.3
	MLZ030T7	42	9.0	7.8	4.4	4.5	4.4
	MLZ038T7	53	11.5	9.4	4.0	3.9	4.0
	MLZ045T7	64	11.5	11.3	2.8	2.9	2.9
	MLZ048T7	67	14	12.3	2.6	2.6	2.5
	MLZ058T7	75	16	14.4	2.3	2.3	2.3
	MLZ066T7	95	17	16.3	2.0	2.0	2.0
MLZ076T7	100	20	19.1	1.7	1.7	1.7	
Motor voltage code 9 380V / 3ph / 60Hz	MLZ015T9	40	7.5	6.0	3.2	4.4	4.4
	MLZ019T9	52	11.5	8.1	2.2	3.0	3.0
	MLZ021T9	52	12	8.3	2.2	3.0	3.0
	MLZ026T9	52	12.5	10.1	2.2	3.0	3.0
	MLZ030T9	81	14	11.8	1.5	1.5	1.5
	MLZ038T9	81	17	14.2	1.5	1.5	1.5
	MLZ045T9	96	20	17.0	1.3	1.3	1.3
	MLZ048T9	110	19	18.5	1.1	1.1	1.1
	MLZ058T9	135	25	21.9	0.91	0.93	0.93
	MLZ066T9	135	28	24.6	0.88	0.89	0.87
MLZ076T9	135	28	28.9	0.88	0.89	0.87	

Single phase electrical characteristics

Compressor model		LRA	MCC	Max.Oper.A	Winding resistance (Ω)	
		A	A	A	Run	Start
Motor code 5 220-240V / 1ph / 50Hz	MLZ015T5	60	19.0	13.8	1.02	1.60
	MLZ019T5	97	23.0	18.3	0.69	1.51
	MLZ021T5	97	25.0	19.5	0.69	1.51
	MLZ026T5	97	26.0	24.2	0.69	1.51
	MLZ030T5	127	32.0	28.9	0.42	1.31
	MLZ038T5	130	38.0	33.9	0.39	1.02
	MLZ042T5	130	40.0	37.1	0.39	1.02
Motor code 1 208-230V / 1ph / 60Hz	MLZ015T1	69	19.0	16.0	0.84	1.70
	MLZ019T1	97	25.0	23.7	0.67	1.57
	MLZ021T1	97	24.5	21.4	0.67	1.57
	MLZ026T1	115	31.5	29.5	0.55	1.47
	MLZ030T1	150	38.0	31.9	0.34	0.90
	MLZ038T1	160	45.0	37.2	0.28	1.76
MLZ042T1	189	60.0	46.6	0.23	0.69	