EMERSON H-series Scroll Condensing Units Instruction Manual

Contents

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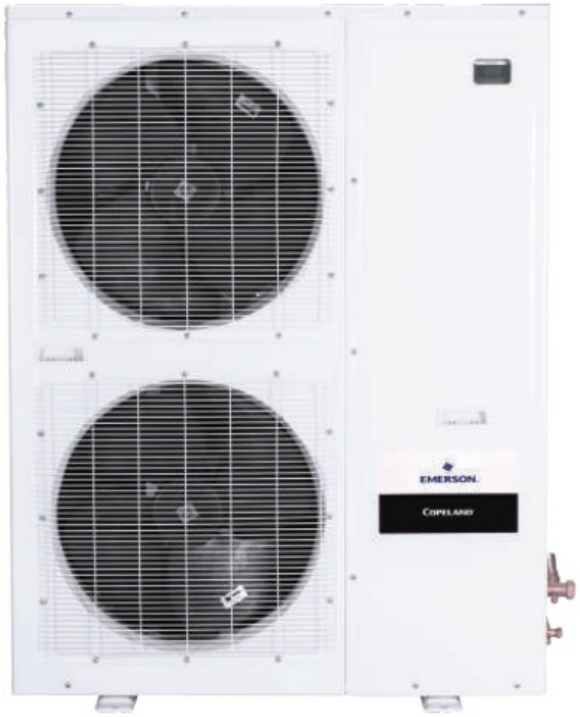


Product Information

- The H-series condensing units are high efficiency outdoor scroll condensing units designed for various applications such as Quick Service Restaurants (QSRs), Convenience Stores (C-stores), hotels,and supermarkets. These units are equipped with pioneering technologies to provide best-in-class performance, specifically addressing the challenges associated with operating in the Middle East region. The key features and benefits of these units include high efficiency, reliability, energy efficiency, aesthetics, and factory-fitted line components.
- The H-series condensing units are available in different configurations based on the application requirements. They are designed to operate in dusty and high ambient conditions, making them suitable for challenging environments. The units prioritize energy efficiency to optimize power consumption. They also take into account the high premium on retail spaces, offering a slim profile and various mounting options. The units are designed for reliability, with features such as internal thermal protectors and EVI CoreSense kits to control superheat and maintain safe discharge temperature. Additionally, the H-series condensing units come with factory-fitted line components for ease of installation and maintenance.

Product Usage Instructions

Installation:

- Choose a suitable location for the condensing unit, considering factors such as accessibility and adequate ventilation.
- Select the appropriate mounting option (front/roof/ground/wall) based on the installation requirements.
- Ensure that the unit is securely mounted and leveled.
- Connect the condensing unit to the necessary power supply according to the unit voltage code provided.
- If connecting multiple evaporators, ensure that the lowest load operation is at least 35% of the total load.

Operation:

- Ensure that the condensing unit is properly connected to the refrigeration system, including the evaporators.
- Check that all the necessary line components, such as filter drier, sight glass, oil separator, and suction accumulator, are installed as per the standard scope of supply.
- Monitor the unit's performance and adjust the adjustable pressure control if necessary.
- Regularly inspect the unit for any signs of abnormal operation, such as overheating or high current.

Maintenance:

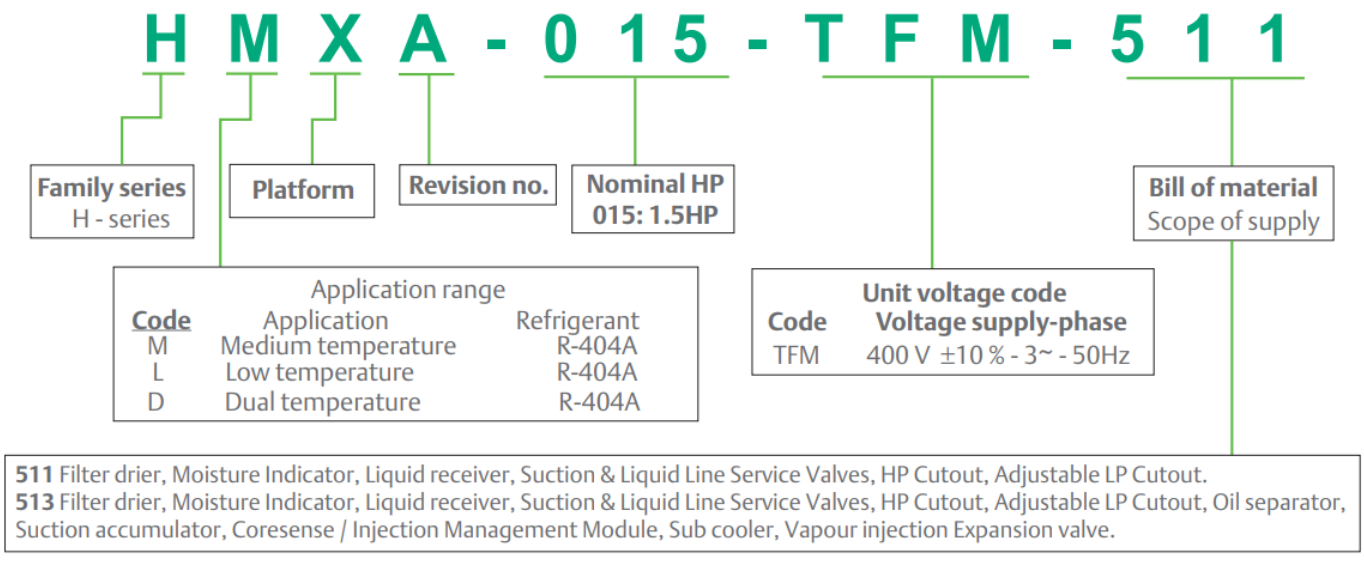
- Follow the recommended maintenance schedule provided in the user manual.
- Clean the condenser block and fan motor regularly to ensure optimal performance.
- Inspect and replace any worn-out or damaged components, such as the liquid receiver, HP safety cartridge switch, and adjustable LP control switch.
- If required, access the pre-wired Electric Junction box for any electrical maintenance.

By following these usage instructions, you can effectively utilize the H-series condensing units for your specific application needs. For detailed troubleshooting or further assistance, refer to the user manual or contact our customer support.

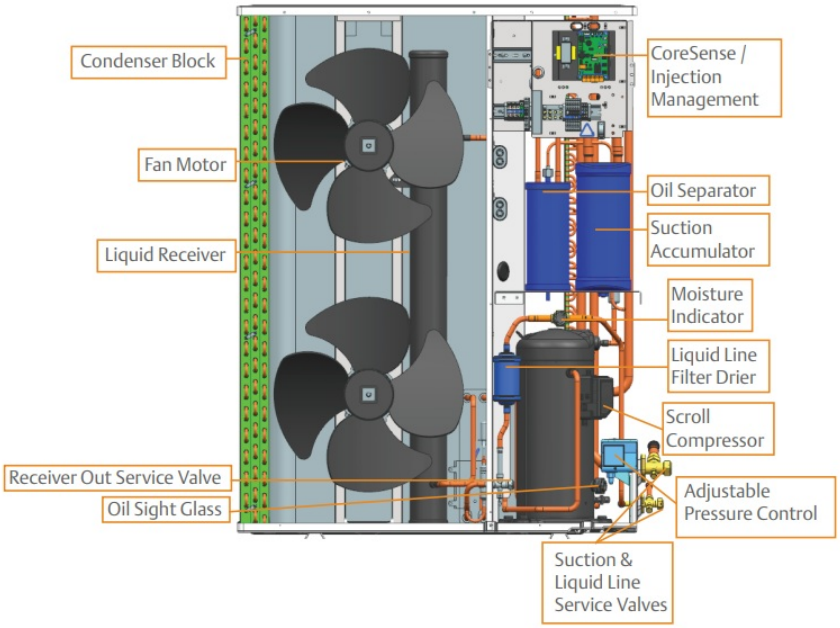
Pioneering technologies for best-in-class products that tackle challenges associated with operating a unit in the Middle East region.

- DUSTY AND HIGH AMBIENT CONDITIONS
- ENERGY EFFICIENCY
- HIGH PREMIUM ON RETAIL SPACES
- UNIT SOUND
- AESTHETICS
- RELIABILITY
- FACTORY FITTED LINE COMPONENTS

Nomenclature



H-Series Internal Layout



Key features & benefits of scroll units:

- **Efficie**
  - High efficiency Copeland™ ZFIVapor injection compressor.
  - Specially designed condenser.
- **Reliabilit**
  - Compressor is provided with Emerson EVI CoreSense™ kits to control superheat of vapor injection and to maintain safe discharge temperature.
  - Fully featured options such as filter drier, sight glass, oil separator and suction accumulator available as standard scope of supply in dual temperature models.
  - Compressors are supplied with internal thermal protectors that safeguards against motor overheating and high current
- **Envelop**

  Unique operating envelope (-40°C to 7°C evaporating temperatures) and up to 49°C ambient, providing a broad range of selection.
- **Inventory**

  Same Units for Medium Temperature and Low Temperature units for majority of the range resulting in rationalization of unit inventory.
- **Maintenance**
  - Optimal layout of components for easy serviceability.
  - Pre-wired Electric Junction box.
  - Liquid receiver, HP safety cartridge switch and adjustable LP control switch.
- **Footprint**

  Slim profile, light weight and front/roof/ground/wall mount options.
- **Multi-evaporator**

  One condensing unit could be connected to multiple evaporators. The lowest load operation should be more than 35% of the total load.

The various components that comprise the scroll condensing unit and their features are as follows:

- **Compressor**
  - **Efficiency**
    - Vapor injection technology improves system capacity by upto 30% and efficiency by upto 20%.
    - New valving technology adjusts the scroll compression ratio based on operating condition, significantly improving performance
  - **Reliability**
    - Dual Compliance: The ability of scroll to move in both axial and radial directions helps in better liquid and debris handling.
    - EVI CoreSense Controller ensures constant superheat of vapor being injected during normal operation and contributes to safe control of discharge line temperature.
  - **Smooth Operation**
    - Scroll compressor has an inbuilt check valve that isolates high pressure gas, allowing the compressor to start unloaded with low inrush currents.
    - Less vibration
  - **Scroll Wear-In**
    - Scroll involutes of Copeland scroll compressor wear in, rather than wear out
    - No constant degradation of performance with time
  - **Compactness**

    Small footprint of Copeland scroll compressors enables compact system designs, reducing weight and dimensions
- **Condenser**

  Internally grooved copper tubes with hydrophilic coated aluminium fins.
- **Fan motors**
  - Thermally protected, single-phase fans.
  - Operation with one of the approved oils is necessary and suitable identification of the specific oil usage is mandatory to prevent unauthorized lubricant oils from being filled into the system.

Performance data

R404A

Unit Model *number of fans*	Ambient temperature (°C)	Evaporating temperature (°C)										
		-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
	35					1.85	2.25	2.69	3.19	3.74	4.36	4.62
	38					1.77	2.15	2.57	3.04	3.57	4.16	4.41

1	HMXA-015-TFM-511	Q	43					1.63	1.97	2.36	2.79	3.28	3.81	4.04
			46					1.54	1.86	2.23	2.64	3.09	3.60	3.82
			49						1.75	2.09	2.47	2.91	3.38	3.59
		P	35					1.22	1.28	1.33	1.37	1.39	1.41	1.42
			38					1.28	1.35	1.40	1.44	1.47	1.49	1.50
			43					1.39	1.47	1.52	1.57	1.60	1.63	1.63
46					1.46	1.54	1.60	1.65	1.69	1.71	1.72			
49						1.62	1.69	1.74	1.78	1.81	1.81			
	HLXA-015-TFM-511	Q	35	0.97	1.22	1.52	1.87	2.28	2.75					
			38	0.93	1.16	1.44	1.77	2.16	2.60					
			43	0.85	1.06	1.31	1.61	1.95	2.36					
			46	0.81	1.00	1.23	1.51	1.83	2.21					
			49	0.77	0.94	1.15	1.41	1.71	2.06					
		P	35	1.27	1.36	1.45	1.55	1.65	1.73					
			38	1.35	1.43	1.52	1.62	1.72	1.81					
			43	1.48	1.56	1.65	1.75	1.85	1.94					
			46	1.57	1.65	1.74	1.83	1.93	2.03					

1			49	1.67	1.74	1.83	1.92	2.02	2.12					
1	HMXA-020-TFM-511	Q	35					2.28	2.81	3.38	4.00	4.67	5.39	5.69
			38					2.12	2.62	3.16	3.75	4.39	5.07	5.35
			43					1.82	2.29	2.79	3.33	3.90	4.52	4.77
			46					1.64	2.08	2.56	3.06	3.60	4.18	4.42
			49						1.86	2.31	2.79	3.29		
		P	35					1.90	1.90	1.90	1.91	1.92	1.95	1.96
			38					2.07	2.06	2.06	2.05	2.05	2.08	2.09
			43					2.40	2.37	2.35	2.33	2.31	2.32	2.33
			46					2.63	2.59	2.55	2.52	2.49	2.49	2.49
			49						2.83	2.78	2.73	2.69		

Unit Model *number of fans*			Ambient temperature (°C)	Evaporating temperature (°C)										
				-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
		Q	35	1.34	1.66	2.07	2.55	3.11	3.73					
			38	1.28	1.58	1.96	2.42	2.94	3.53					
			43	1.18	1.45	1.79	2.20	2.66	3.19					
			46	1.12	1.37	1.68	2.06	2.50	2.99					
			49	1.06	1.29	1.58	1.92	2.33	2.78					
			35	1.68	1.83	1.98	2.13	2.27	2.37					

1	HLXA-020-TFM-511	P	38	1.77	1.92	2.08	2.24	2.37	2.47				
			43	1.94	2.09	2.26	2.41	2.55	2.65				
			46	2.05	2.20	2.37	2.53	2.66	2.76				
			49	2.17	2.32	2.49	2.65	2.78	2.88				
1	HDXA-030-TFM-513	Q	35	1.76	2.02	2.42	2.94	3.46	4.11	4.79	5.49	6.17	6.82	7.06
			38	1.64	1.90	2.29	2.78	3.36	4.00	4.67	5.35	6.01	6.64	6.87
			43	1.49	1.75	2.14	2.62	3.18	3.80	4.45	5.10	5.73	6.32	6.55
			46	1.38	1.64	2.03	2.51	3.06	3.67	4.30	4.94	5.55	6.13	6.34
			49	1.27	1.53	1.91	2.29	2.93	3.53	4.15	4.77	5.37		
		P	35	1.42	1.53	1.63	1.73	1.93	2.05	2.18	2.33	2.50	2.70	2.80
			38	1.58	1.70	1.82	1.92	2.04	2.16	2.29	2.44	2.61	2.82	2.91
			43	1.78	1.90	2.02	2.14	2.25	2.38	2.51	2.67	2.84	3.04	3.13
			46	1.92	2.05	2.17	2.29	2.41	2.54	2.67	2.83	3.00	3.20	3.29
			49	2.08	2.22	2.34	2.49	2.59	2.72	2.86	3.01	3.19		
			35	2.37	2.73	3.26	3.95	4.64	5.51	6.43	7.35	8.26	9.11	9.43
			38	2.20	2.55	3.07	3.74	4.51	5.36	6.26	7.16	8.04	8.86	9.17
			43	2.00	2.35	2.87	3.52	4.27	5.09	5.95	6.82	7.66	8.44	8.73
			46	1.86	2.21	2.72	3.36	4.10	4.91	5.75	6.60	7.42	8.17	

		Q	49	1.70	2.05	2.44	3.06	3.93	4.72	5.55	6.37	7.17		
			35	1.70	1.84	1.96	2.09	2.34	2.48	2.65	2.84	3.05	3.31	3.42
			38	1.91	2.06	2.20	2.33	2.47	2.62	2.79	2.98	3.20	3.45	3.56
			43	2.14	2.30	2.45	2.59	2.74	2.90	3.07	3.26	3.48	3.73	3.84
			46	2.31	2.47	2.63	2.78	2.93	3.10	3.27	3.47	3.69	3.93	
1	HDXA-040-TFM-513	P	49	2.51	2.68	2.85	3.02	3.16	3.32	3.50	3.70	3.92		

Unit Model *number of fans*		Ambient temperature (°C)	Evaporating temperature (°C)										
			-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
		35	2.92	3.36	4.02	4.88	5.75	6.84	7.99	9.17	10.33	11.43	11.85
		38	2.73	3.16	3.81	4.64	5.60	6.67	7.80	8.94	10.07	11.14	11.54
		43	2.50	2.93	3.57	4.38	5.32	6.36	7.44	8.54	9.62	10.63	11.01
		Q 46	2.33	2.77	3.40	4.20	5.13	6.15	7.21	8.29	9.33	10.31	10.68
		49	2.14	2.58	3.21	4.01	4.92	5.92	6.97	8.02	9.04	9.99	
		35	2.17	2.32	2.47	2.61	2.89	3.05	3.24	3.45	3.70	4.00	4.13
		38	2.40	2.58	2.73	2.89	3.04	3.21	3.40	3.61	3.86	4.16	4.29
		43	2.67	2.85	3.02	3.18	3.35	3.52	3.71	3.92	4.17	4.46	4.59
		46	2.87	3.06	3.23	3.40	3.56	3.74	3.93	4.15	4.39	4.68	4.80
	HDXA-050-TFM-513												

2		P	49	3.10	3.30	3.48	3.65	3.82	3.99	4.19	4.40	4.65	4.92	
2	HDXA-065-TFM-513	Q	35	3.79	4.28	4.98	5.87	6.86	8.08	9.47	11.00	12.66	14.43	15.17
			38	3.78	4.22	4.87	5.72	6.76	7.96	9.32	10.82	12.45	14.20	14.92
			43	3.78	4.18	4.78	5.59	6.58	7.74	9.05	10.50	12.08	13.77	14.48
			46	3.79	4.15	4.73	5.51	6.47	7.59	8.87	10.29	11.84	13.50	14.19
			49	3.79	4.13	4.67	5.42	6.34	7.44	8.69	10.07	11.58	13.21	
		P	35	2.64	2.80	2.96	3.12	3.47	3.65	3.84	4.03	4.22	4.41	4.49
			38	2.93	3.11	3.30	3.49	3.67	3.87	4.06	4.26	4.46	4.66	4.74
			43	3.22	3.43	3.64	3.84	4.05	4.26	4.48	4.69	4.91	5.12	5.21
			46	3.43	3.65	3.87	4.09	4.31	4.53	4.76	4.98	5.20	5.43	5.52
			49	3.66	3.90	4.13	4.36	4.59	4.83	5.06	5.30	5.53	5.76	
			35	4.78	5.39	6.26	7.38	8.60	10.13	11.85	13.75	15.80	17.98	18.89
			38	4.77	5.32	6.13	7.19	8.47	9.97	11.66	13.51	15.53	17.67	18.57
		Q	43	4.77	5.26	6.02	7.02	8.24	9.68	11.30	13.09	15.04	17.11	17.98
			46	4.78	5.23	5.95	6.91	8.10	9.49	11.07	12.82	14.72	16.75	
	HDXA-075-TFM-513		49	4.79	5.12	5.75	6.62	7.94	9.29	10.82	12.53	14.38		
			35					4.35	4.59	4.85	5.11	5.38	5.65	5.76

				3.25	3.46	3.67	3.88							
			38	3.62	3.86	4.10	4.35	4.61	4.87	5.14	5.41	5.69	5.98	6.09
		P	43	4.00	4.27	4.54	4.82	5.10	5.38	5.68	5.97	6.28	6.58	6.71
			46	4.27	4.55	4.84	5.13	5.43	5.73	6.04	6.35	6.67	6.99	
2			49	4.57	5.02	5.31	5.61	5.80	6.12	6.44	6.77	7.10		

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Unit Model *number of fans*		Ambient temperature (°C)	Evaporating temperature (°C)										
			-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
HDXA-030-TFM-513 *1*	Q	35	1.37	1.68	2.06	2.51	3.03	3.64	4.32	5.09	5.94	6.88	7.28
		38	1.30	1.62	2.00	2.44	2.95	3.54	4.21	4.95	5.77	6.67	7.05
		43	1.26	1.57	1.94	2.38	2.88	3.45	4.09	4.81	5.60	6.46	6.83
		46	1.23	1.54	1.90	2.33	2.83	3.39	4.02	4.72	5.49	6.33	
		49	1.20	1.51	1.87	2.29	2.77	3.32	3.93	4.61	5.36		
	P	35	1.25	1.33	1.42	1.51	1.62	1.74	1.86	2.01	2.18	2.36	2.44
		38	1.38	1.46	1.55	1.65	1.76	1.88	2.01	2.17	2.34	2.53	2.61
		43	1.52	1.60	1.68	1.78	1.90	2.02	2.16	2.32	2.49	2.69	2.78
		46	1.61	1.69	1.78	1.88	1.99	2.12	2.26	2.42	2.60	2.81	
		49	1.72	1.80	1.88	1.98	2.10	2.23	2.37	2.54	2.73		
		35	1.82	2.23	2.73	3.33	4.02	4.82	5.73	6.74	7.86	9.09	9.61
		38	1.72	2.15	2.65	3.23	3.92	4.69	5.57	6.55	7.62	8.80	9.30
		43	1.66	2.08	2.57	3.15	3.81	4.57	5.42	6.36	7.39	8.52	9.00

HDXA-040-TFM-513 *1*	Q	46	1.63	2.04	2.53	3.09	3.75	4.48	5.31	6.23	7.24	8.33	
		49	1.60	2.00	2.48	2.85	3.67	4.39	5.20	6.09	7.07		
	P	35	1.50	1.59	1.70	1.82	1.94	2.09	2.25	2.44	2.64	2.87	2.97
		38	1.66	1.76	1.86	1.98	2.12	2.27	2.43	2.62	2.84	3.08	3.18
		43	1.82	1.92	2.03	2.15	2.28	2.44	2.61	2.81	3.03	3.29	3.39
		46	1.93	2.03	2.14	2.26	2.40	2.56	2.74	2.94	3.17	3.43	
		49	2.06	2.16	2.27	2.41	2.54	2.70	2.88	3.09	3.33		
HDXA-050-TFM-513 *2*	Q	35	2.23	2.74	3.35	4.09	4.94	5.93	7.05	8.31	9.71	11.25	11.90
		38	2.12	2.63	3.25	3.97	4.82	5.78	6.87	8.09	9.45	10.95	11.55
		43	2.04	2.55	3.16	3.87	4.70	5.64	6.69	7.88	9.19	10.65	11.25
		46	2.00	2.51	3.11	3.81	4.62	5.54	6.58	7.73	9.01	10.40	11.00
		49	1.96	2.46	3.05	3.74	4.53	5.43	6.44	7.57	8.82	10.20	
	P	35	1.92	2.03	2.15	2.29	2.44	2.61	2.80	3.01	3.25	3.51	3.63
		38	2.11	2.23	2.35	2.49	2.65	2.82	3.01	3.23	3.47	3.74	3.86
		43	2.30	2.42	2.54	2.68	2.84	3.02	3.22	3.44	3.69	3.97	4.09
		46	2.43	2.55	2.67	2.82	2.98	3.16	3.36	3.59	3.84	4.13	4.25
		49	2.58	2.70	2.82	2.97	3.13	3.31	3.52	3.75	4.01	4.31	

Unit Model *number of fans*		Ambient temperature (°C)	Evaporating temperature (°C)										
			-40	-35	-30	-25	-20	-15	-10	-5	0	5	7
HDXA-065-TFM-513 *2*	Q	35	2.60	3.29	4.10	5.02	6.07	7.25	8.58	10.05	11.70	13.50	14.25
		38	2.54	3.23	4.02	4.92	5.93	7.08	8.35	9.78	11.35	13.05	13.80
		43	2.48	3.16	3.94	4.81	5.80	6.91	8.15	9.52	11.05	12.70	13.40
		46	2.43	3.11	3.88	4.74	5.71	6.80	8.01	9.36	10.85	12.45	13.15
		49	2.38	3.05	3.81	4.66	5.61	6.68	7.87	9.19	10.65	12.25	
	P	35	2.39	2.50	2.61	2.73	2.87	3.03	3.21	3.42	3.66	3.93	4.04
		38	2.65	2.78	2.91	3.05	3.20	3.37	3.56	3.77	4.01	4.28	4.40
		43	2.88	3.04	3.19	3.35	3.51	3.69	3.89	4.11	4.36	4.63	4.75
		46	3.04	3.21	3.38	3.55	3.72	3.91	4.11	4.34	4.59	4.87	4.99
		49	3.21	3.40	3.58	3.76	3.95	4.15	4.36	4.59	4.85	5.13	
HDXA-075-TFM-513		35	3.40	4.32	5.37	6.57	7.93	9.46	11.20	13.10	15.15	17.45	18.40
		38	3.33	4.23	5.26	6.43	7.74	9.22	10.85	12.70	14.70	16.90	17.85
	Q	43	3.24	4.14	5.14	6.28	7.56	8.99	10.60	12.35	14.30	16.40	17.30
		46	3.18	4.06	5.06	6.18	7.44	8.84	10.40	12.10	14.00	16.10	
		49	3.10	3.98	4.89	6.05	7.30	8.68	10.20	11.90	13.75		
		35					3.68	3.89	4.14	4.43	4.75	5.12	5.28
			3.01	3.16	3.31	3.48							
		38	3.34	3.52	3.70	3.90	4.11	4.34	4.61	4.90	5.24	5.61	5.77

	P	43	3.65	3.86	4.07	4.29	4.52	4.78	5.06	5.37	5.71	6.10	6.26
		46	3.85	4.08	4.32	4.55	4.80	5.07	5.36	5.68	6.03	6.43	
2		49	4.07	4.33	4.63	4.80	5.10	5.38	5.68	6.02	6.38		

Mechanical data

Condensing Unit	Compressor model	Receiver Volume (l)	Air Flow (m^3/s)	Dimensions Depth/Width/Height (mm)	Suction Size	Liquid Size	Net Weight (kg)
HMXA-015-TFM-511	ZS11KAE-TFD-600	4.8	0.81	424 x1029 x 840	3/4″	1/2″	81
HLXA-015-TFM-511	ZF06KAE-TFD-618	4.8	0.81	424 x1029 x 840	3/4″	1/2″	81
HMXA-020-TFM-511	ZB15KQE-TFD-558	4.8	0.81	424 x1029 x 840	3/4″	1/2″	85
HLXA-020-TFM-511	ZF09KAE-TFD-618	4.8	0.81	424 x1029 x 840	3/4″	1/2″	82
HDXA-030-TFM-513	ZFI09KQE-TFD-550	4.8	0.81	424 x1029 x 840	3/4″	1/2″	85
HDXA-040-TFM-513	ZFI13KQE-TFD-550	4.8	0.81	424 x1029 x 840	3/4″	1/2″	91
HDXA-050-TFM-513	ZFI17KQE-TFD-550	6.9	1.64	424 x1029 x1242	7/8″	1/2″	106

HDXA-065-TFM-513	ZFI21KQE-TFD-550	6.9	1.64	424 x1029 x1242	7/8″	1/2″	120
HDXA-075-TFM-513	ZFI23KQE-TFD-550	6.9	1.64	424 x1029 x1242	7/8″	1/2″	125

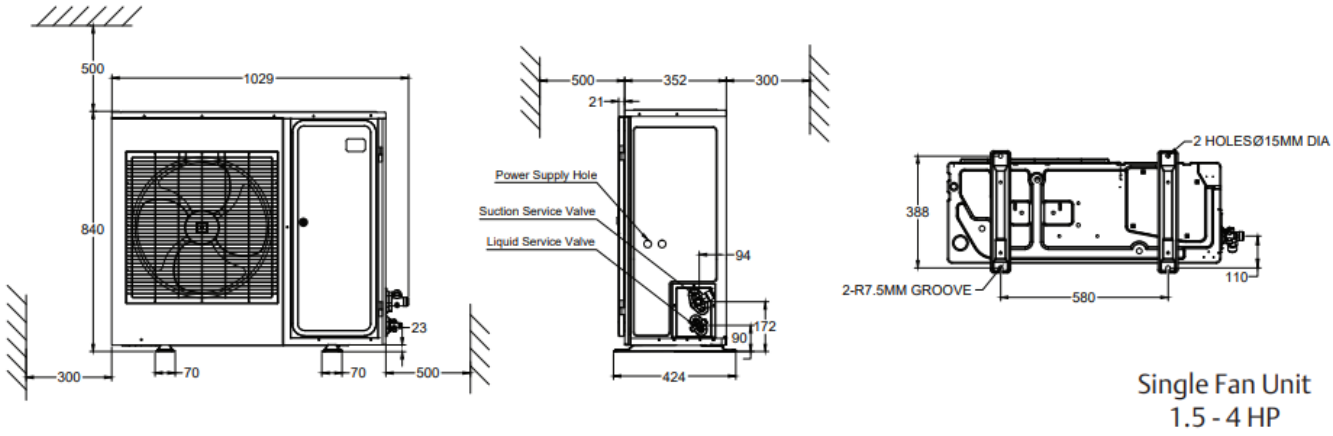
Electrical data

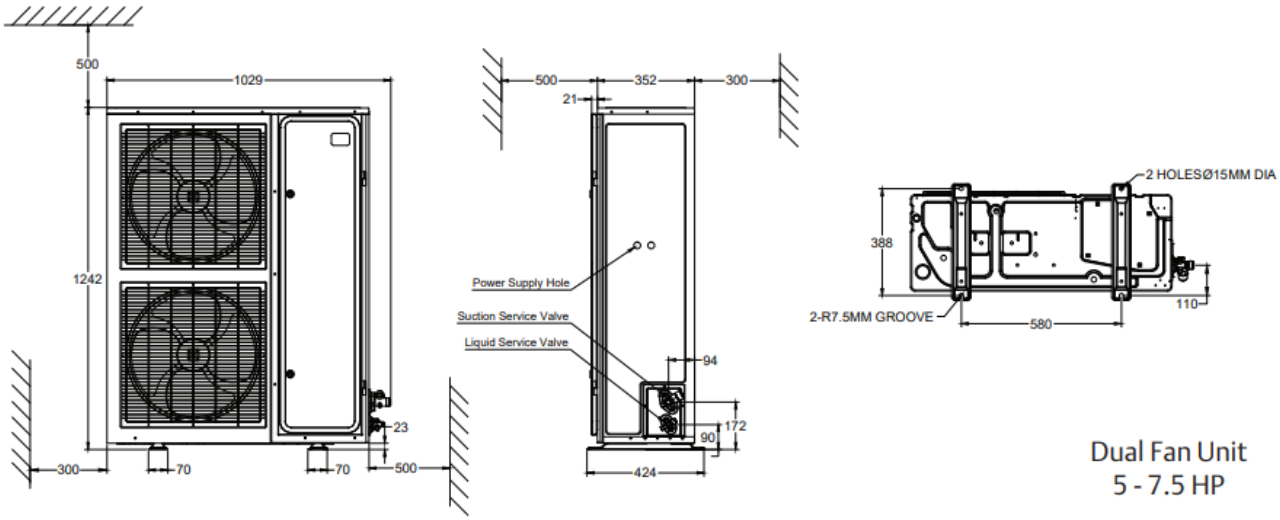
Condensing Unit	Compressor model	Unit MOC	Compressor			Total Fan Current
			LRA	MOC	RLA	
HMXA-015-TFM-511	ZS11KAE-TFD-600	4.2	27.0	3.3	4.3	0.87
HLXA-015-TFM-511	ZF06KAE-TFD-618	5.1	28.0	4.2	3.8	0.87
HMXA-020-TFM-511	ZB15KQE-TFD-558	5.8	26.0	4.9	5.0	0.87
HLXA-020-TFM-511	ZF09KAE-TFD-618	6.2	41.6	5.3	4.9	0.87
HDXA-030-TFM-513	ZFI09KQE-TFD-550	6.2	23.5	5.3	4.9	0.87
HDXA-040-TFM-513	ZFI13KQE-TFD-550	7.5	40.0	6.6	6.4	0.87
HDXA-050-TFM-513	ZFI17KQE-TFD-550	9.8	50.0	8.1	6.9	1.74
HDXA-065-TFM-513	ZFI21KQE-TFD-550	12.6	64.0	10.9	8.9	1.74
HDXA-075-TFM-513	ZFI23KQE-TFD-550	14.1	74.0	12.4	10.6	1.74

Container fitment

Condensing unit model	Number of fans	20 ft. container	40 ft. container
HMXA-015-TFM-511	1	40	80
HLXA-015-TFM-511	1	40	80
HMXA-020-TFM-511	1	40	80
HLXA-020-TFM-511	1	40	80
HDXA-030-TFM-513	1	40	80
HDXA-040-TFM-513	1	40	80
HDXA-050-TFM-513	2	20	40
HDXA-065-TFM-513	2	20	40
HDXA-075-TFM-513	2	20	40

Dimensional drawings





Application guidelines

- **Multi-evaporator guidelines**

The evaporators being connected to the condensing unit are required be of similar evaporating temperatures (For Example: Combi Freezer). The lowest load operation should be more than 35% of total load.

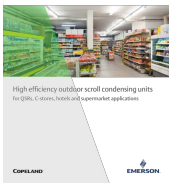
- **Liquid line insulation for HDX units**
  Liquid line should be insulated for all HDX models with a 19 mm insulation thickness during the installation. Temperature could be as low as –15°C.
- **Condensing unit on rubber pads**
  Please ensure that the condensing units are mounted on the rubber pads and not mounted directly on the concrete platform or welded directly on any frame.
- **Auto cycling HP cutout**
  As our condensing units are provided with Auto reset HP cutout, please ensure that the controller used in the system takes care of short cycling through HP cutout. Frequent cycling leads to oil getting pumped out of the compressor
- **Continuous pump down cycle**
  Wherever pump down cycle is provided, please ensure that this is of one time pump down cycle. In case of continuous pump down, any minor leakage in the liquid line solenoid valve or system with larger refrigerant charge might lead to frequent cycling of compressor during thermostat OFF cycle. Short cycling protection is required when continuous pump down is implemented.
- **LP cutout adjustment**
  Our LP cutout is with the factory default values. Please ensure that these are adjusted as per the application switch for proper operation of the cutouts.
- **Reverse rotation**
  - Scroll compressors pump in one direction only
    - Low current
    - More noise
    - Balanced suction & discharge pressure
  - Correct by interchanging any two phases
  - Short term reverse rotation will not damage the compressor
- **Refrigerant charging**
  - Pre-charging must be with liquid refrigerant through the liquid line or the liquid receiver. At least 70% of the refrigerant to be pre charged in the system before starting the compressor.
  - Additional charge to be added as controlled liquid in the suction side. Please don’t bypass the HP/LP cutout during charging process.

Contact list

- United Arab Emirates Jebel Ali Free Zone
  - **P.O. Box** 26382, Dubai United Arab Emirates
  - **Toll Free:** 8000 441 3428
  - **Tel:** +971 4 8118100
  - **Fax:** +971 4 8865465

- **South Africa**
  - 11 Quark Crescent
  - Linbro Business Park Sandton 2065, South Africa
  - **Toll** Free: 0800 980 3711
  - **Tel:** +27 11 451 3700
  - **Fax:** +27 11 451 3800
- **Saudi Arabia**
  - P.O. Box 34332 – 3620 2nd Industrial City, 67 St. Dammam, Saudi Arabia
  - **Toll Free:** 8008 443 426
  - **Tel:** +966 3 8147560
  - **Fax:** +966 3 8147570
- **Egypt**
  - P.O.Box 11799
  - 11 Mustafa Refaat Street Sheraton, Heliopolis Cairo, Egypt
  - **Tel:** +20 2 226 5854

Documents / Resources

	EMERSON H-series Scroll Condensing Units [pdf] Instruction Manual HMXA-015-TFM-511, HMXA-015-TFM-513, H-series, H-series Scroll Condensing Units, Scroll Condensing Units, Condensing Units, Units

References

- EmersonClimateMEA.com