

Liebert XDV

Parts Manual



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1. Product Description

Increased Cooling Power for Rack Enclosures and High Heat Density Areas.

Liebert X-treme Density heat removal system is designed to address the higher heat loads generated by densely populated electronic rack enclosures. It can cool more than 30 kW per rack. Individual modules can improve enclosure airflow or cool hot spots, or zones. The modules in the Liebert XD system use a unique heat rejection process, using a pumped refrigerant. It operates at low pressure and becomes a gas at room temperatures, making it ideal for use around electronic equipment. Liebert XD complement the precision cooling provided by Liebert Deluxe System/3 or Liebert DS, and are built with the quality and features you expect from Liebert.

Liebert XDO — Overhead Fan Coil: This ceiling-installed unit is placed above the heat-emitting equipment, drawing hot air from the Hot Aisle and discharging cold air down into the Cold Aisle. Connects via flexible piping and uses pumped refrigerant technology.

Liebert XDV — Vertical Top Cooler: The XDV is installed above or on the rack enclosure. It draws in hot air from inside the enclosure or from the Hot Aisle. It then cools the air and discharges it down into the Cold Aisle. Connects via flexible piping and uses pumped refrigerant technology.

Liebert XDH — Horizontal Row Cooler: The XDH is placed in line with rack enclosures and air from the hot aisle is drawn in through the rear of the unit, cooled, and discharged into the cold aisle where the electronic equipment air inlets are located. Connects via flexible piping and uses pumped refrigerant technology.

Liebert XD CoolFrame — Rack Cooler: The Liebert XD CoolFrame is designed and performance certified when attached to the back of the Egenera BladeFrame EX rack. It cools the exhaust air from the rack before the air enters the room. Connects via flexible piping to the Liebert XD system and uses pumped refrigerant technology. Liebert is a member of Egenera Inc. Assured Solution Alliance program.

Liebert XDP — Pumping Unit: When a building chilled water system is available, the XDP serves as an intermediary, to isolate the building chilled water circuit from the pumped refrigerant circuit. It circulates the refrigerant to the cooling modules at a temperature always above the actual dew point to prevent condensation.

Liebert XDC — Refrigerant Chiller: The XDC is an indoor unit that connects directly to the modules via the pumped refrigerant circuit. It circulates the refrigerant to the cooling modules at a temperature always above the actual dew point to prevent condensation.

Liebert XD Piping: The XD Piping is pre-fabricated distribution piping that is installed in anticipation of a growing and changing system. XD cooling modules are added as required and are quickly made operational with flexible connection piping with quick-connect fittings. The flexible connection piping also allows the cooling modules to be re-positioned without interruption in operation. Liebert XD Piping makes the system adaptive and provides for future expansion and simplifies both the installation of additional units and the reconfiguration of components as needs change.

Liebert XDA — Air Flow Enhancer: Lightweight fan unit is mounted to the exhaust side of a rack enclosure. The XDA, that is compatible with most rack enclosures, increases the airflow through densely populated enclosures, past congested cabling, thus removing hot spots within the enclosure that can threaten the uptime of critical systems.

Features

- Can Cool More Than 30 kW per rack
- Utilizes Pumped Refrigerant Technology
- Energy Efficient
- Intelligent Controls of the Refrigerant
- Floor Space Efficient
- Scalable and Flexible

2. Model Number Definition

Model Number Breakdown / Liebert XDO XDO20BK-0

XD	O	20	B, D	K, S	—, P	—, E	0
Liebert	O = Overhead	= Model	B = Basic Unit	K=120V – 1ph-60Hz	- = Hard	- = Dom.	0 = Revision
Extreme Heat	Cooling Module	Size	D = Condensate	S=230V – 1ph-50Hz, CE,	Piped	Packaging	Level
Density			Detection	220-240V– 1ph-50/60Hz	P= Coupling	E= Exp.	
System						Packaging	

Model Number Breakdown / Liebert XDV XDV10BK-0

XD	V	10	B, D	K, S, T	—, P	—, E	0
Liebert	V = Vertical	= Model	B = Basic Unit	K = 120V - 1ph-60Hz	- = Hard Piped	- = Dom.	0 = Revision
Extreme Heat	Top Cooler	Size	D = Condensate	S = 230V – 1ph-50Hz,	P= Coupling	Packaging	Level
Density			Detection	CE		E= Exp.	
System				T = 208-240V– 1ph-60Hz, 220-240V-1ph-50Hz		Packaging	

Model Number Breakdown / Liebert XD CoolFrame XD-CF-10-BP-0

XD	CF	10	B, T	P	—, E	0
Liebert	CF = Module	= Model	B = Bottom Unit	P = Coupling	- = Dom.	0 = Revision Level
Extreme Heat	for Bladeframe	Size	T = Top Unit		Packaging	
Density	EX				E= Exp.	
System					Packaging	

Model Number Breakdown / Liebert XDH XDH20BK-0

XD	H	20	B, D	K, S, T	—, P	—, E	0
Liebert	H = Horizontal	= Model	B = Basic Unit	K=120V – 1ph-60Hz	- = Hard	- = Dom.	0 = Revision
Extreme Heat	Row Cooler	Size	D = Condensate		Piped	Packaging	Level
Density			Detection		P= Coupling	E= Exp.	
System						Packaging	

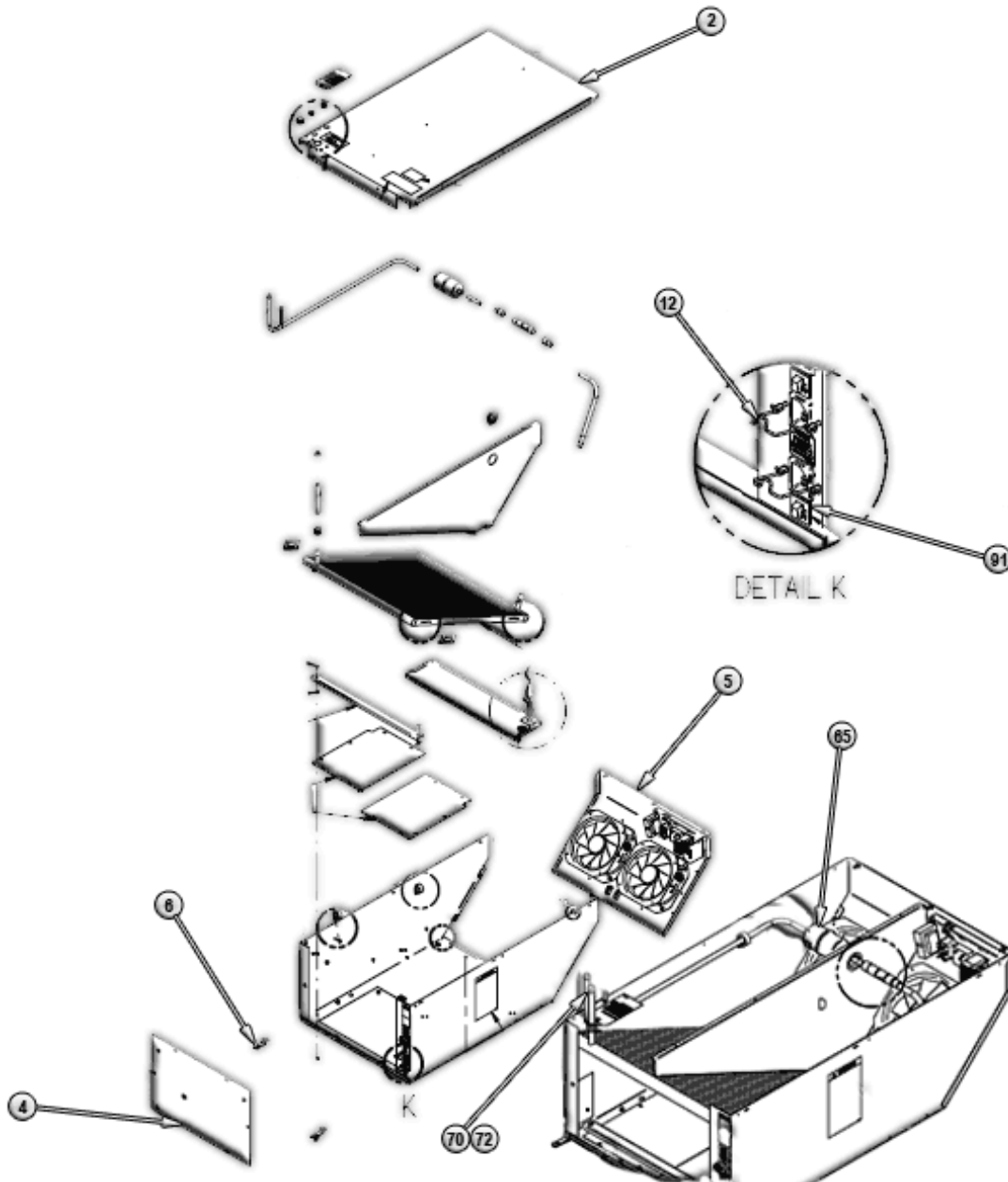
Model Number Breakdown / Liebert XDP XDP160RA-1

XD	P	160	R	A, C, M	—	—	1
Liebert	P = Pumping	= Model	R = Pump	C = 208V - 3ph-60Hz	- = Place	- = Place	1 = Revision
Extreme Heat	Unit	Size	Redundancy	A = 460V - 3ph-60Hz	Holder	Holder	Level
Density				M = 380/420V - 3ph-50Hz,			
System				CE			

Model Number Breakdown / Liebert XDC XDC160AA-0

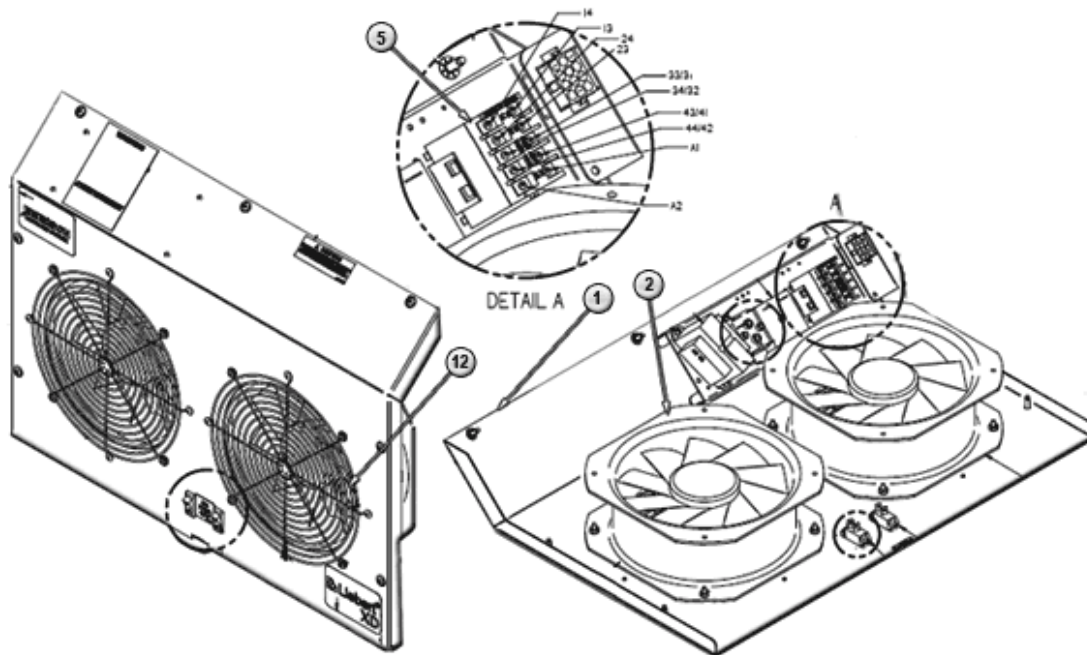
XD	C	160	A	A, M	—	—	0
Liebert	C = Chiller	= Model	A = Place Holder	A = 460V - 3ph-60Hz	- = Place Holder	- = Place	0 = Revision
Extreme Heat		Size		M = 380/420V - 3ph-50Hz, CE	Holder	Holder	Level
Density							
System							

3. XDV Assembly



Item	Part Number	Description	Quantity
2	177439P1	COVER XDV	1
4	179185G1	GRILLE REAR INLET PAINTED XDV	1
5	177434G1	PLATE FAN MTG 120V ASSY XDV	1
	177434G2	PLATE FAN MTG 230V ASY XDV8	1
	177434G3	PLATE FAN MTG 120V ASY LQDXDV8	1
	177434G4	PLATE FAN MTG 230V ASY LQDXDV8	1
6	177416P1	BRACKET XDV MTG 24"CABINET	1
12	179069P1	CORD LINE RETAINER CLIP 730-00	2
65	178082P1	FILTER/DRIER 1/2" SOLDER	1
70	P-3910	VALVE ACCESS BODY 1/4 EXT 2"	1
72	P02-0290	VALVE CORE REFRIGERANT	1
91	179071P2	CB 3.0A PANEL MNT	2

4. Plate Fan Mounting



Item	Part Number	Description	Quantity
1	177436P1	PLATE FAN MTG XDV	1
2	177625P1	FAN MOTOR 600 CFM 115 V 50/60	2
	177625P2	FAN MOTOR 600 CFM 230V 50/60	2
5	180811P1	RELAY 4P 120V 2NO/2NC	1
	180811P2	RELAY 4P230V 2NO/2NC	1
12	177415P1	GUARD FINGER 9" NOM FAN	2
	177170G1	GUARD FINGER 9" NOM FAN BLACK	2

5. Accessories

Part Number	Description
180427G1	External Mounting Brackets Kits, for One XDV
180427G5	External Mounting Brackets Kits, for Five XDV
181400G1	Flexible Piping Kit, for One XDV, 6ft
181400G2	Flexible Piping Kit, for One XDV, 10ft
180427G11	KIT HANGER XDV 1 UNIT 34"NOM
180427G15	KIT HANGER XDV 5 UNIT 34"NOM
180427G22	KIT HANGER XDV 2 UNIT 19"+33"

6. Parts Gallery

			
177415P1	177416P1	177436P1	177439P1
			
177625P1	178082P1	179069P1	179071P2
			
179185G1	180811P1	P02-0290	P-3910

7. Revision Page

Revision Date	Modification	Details
01/2011	-	New layout conversion.