



# Ecody3DK

*Closed Loop Adiabatic Liquid Cooler*

**The world's most efficient cooling – optimized for you.**

The Ecody 3DK offers sustainability, performance and adaptability for your application and your facility.



Bulletin: SPECS-SI.3DK.A4.ENG.5060.00.07

Effective: April 4, 2016

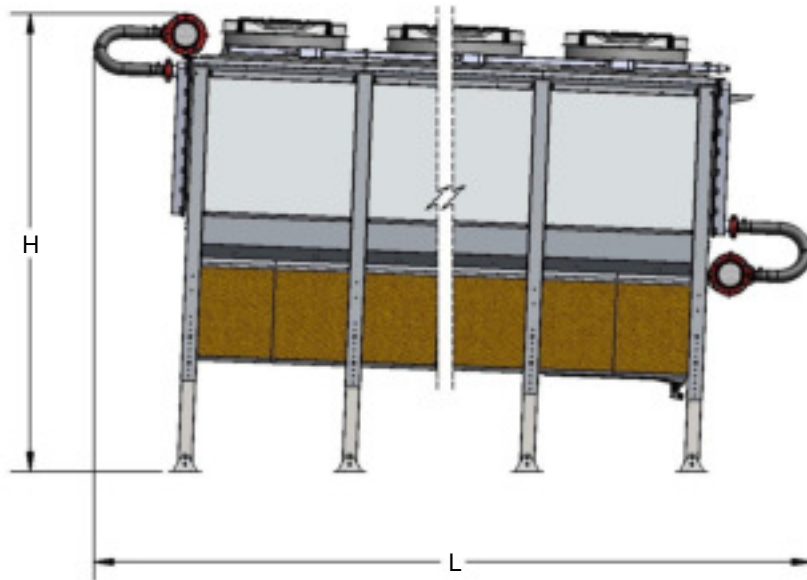
Supersedes: September 24, 2014

[www.frigel.com](http://www.frigel.com)

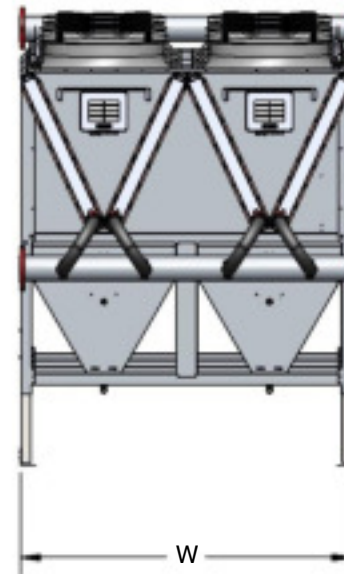


## Self-Draining Configuration

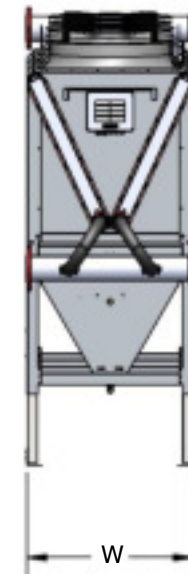
Water systems (no glycol) with recirculation pump stations for freezing climates



2-Row Units



Single Row Units





## Self-Draining Configuration

Water systems (no glycol) with recirculation pump stations for freezing climates

MECHANICAL <sup>1</sup>															
Model	Rows	Fans Per Row	Total Fans	Dimensions <sup>2</sup> mm						Victaulic™ Connections <sup>4</sup> mm (in)	Internal Volume liter	Approximate Weights		Sound Level dB(A) @ 10 m	
				L	W	H <sup>3</sup>	H <sup>3</sup> (+40)	H <sup>3</sup> (+84)	H <sup>3</sup> (+188)			Shipping <sup>5</sup> kg	Operating <sup>6</sup> kg	Fan Type <sup>7</sup>	
														EC	EZ
3DK21D	1	2	2	3,607	1,127	3,019	3,419	-	-	DN150 (6)	120	605	800	54	52
3DK31D	1	3	3	4,708	1,127	3,063	3,463	-	-	DN150 (6)	140	780	1,000	56	54
3DK41D	1	4	4	5,809	1,127	3,107	3,507	-	-	DN150 (6)	160	980	1,200	57	55
3DK51D	1	5	5	6,910	1,127	3,151	3,551	3,991	-	DN150 (6)	180	1,190	1,400	58	56
3DK71D	1	7	7	9,157	1,127	3,297	3,697	4,137	-	DN200 (8)	255	1,630	1,900	60	58
3DK101D	1	10	10	12,460	1,127	3,429	3,829	4,269	-	DN200 (8)	350	2,275	2,700	61	59
3DK22D	2	2	4	3,607	2,235	3,019	3,419	-	-	DN150 (6)	235	1,040	1,300	57	55
3DK32D	2	3	6	4,708	2,235	3,063	3,463	-	-	DN150 (6)	275	1,355	1,700	59	57
3DK42D	2	4	8	5,809	2,235	3,107	3,507	-	-	DN150 (6)	315	1,750	2,100	60	58
3DK52D	2	5	10	6,910	2,235	3,151	3,551	3,991	5,031	DN150 (6)	360	2,095	2,500	61	59
3DK72D	2	7	14	9,157	2,235	3,297	3,697	4,137	5,177	DN200 (8)	510	2,855	3,400	62	60
3DK102D	2	10	20	12,460	2,235	3,429	3,829	4,269	5,309	DN200 (8)	700	3,910	4,700	64	62

<sup>1</sup> Do **NOT** use the data in this document for construction purposes. Specifications are subject to change without notice.

<sup>2</sup> Extended support leg requirements (+40 cm, +84 cm or +188 cm) are determined by Frigel.

<sup>3</sup> Add 28 mm for models with EZ fans (21, 22, 31, 32, 41, 42, 51 & 52).

<sup>4</sup> Models with 188 cm extended legs have DN300 (12 inch) connections. Adiabatic chamber spray connections are ¾ inch BSP per row and are accessible at both ends of each row.

Unused connections must be plugged. Adiabatic chamber drain connections are 38 mm ID hose barb.

<sup>5</sup> This is also the approximate rigging weight, excluding the additional weight of the optional extended support legs.

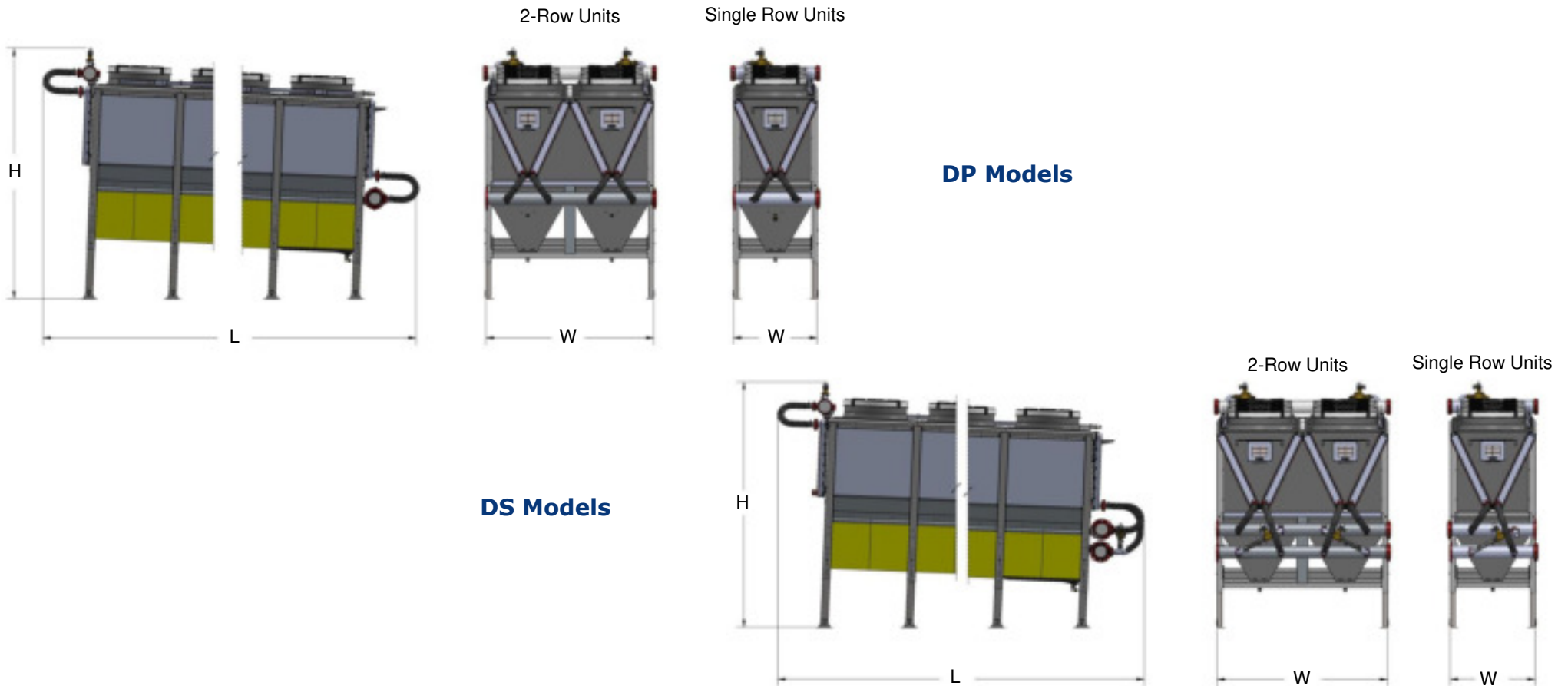
<sup>6</sup> Operating weights do not include external flooded piping or support steel structures.

<sup>7</sup> EC = brushless variable speed fan motors. EZ = brushless variable speed fan motors with exhaust diffusers.



## Self-Draining with Parallel or Series Coil Configuration

Water systems (no glycol) without recirculation pump stations for moderate climates with minimal freezing conditions (model types selected by Frigel for optimum performance)





## Self-Draining with Parallel or Series Coil Configuration

Water systems (no glycol) without recirculation pump stations for moderate climates with minimal freezing conditions (model types selected by Frigel for optimum performance)

MECHANICAL <sup>1</sup>															
Model	Rows	Fans Per Row	Total Fans	Dimensions <sup>2</sup> mm						Victaulic™ Connections <sup>3</sup> mm (in)	Internal Volume liter	Approximate Weights		Sound Level dB(A) @ 10 m	
				L	W	H	H (+40)	H (+84)	H (+188)			Shipping <sup>4</sup> kg	Operating <sup>5</sup> kg	Fan Type <sup>6</sup>	
														EC	EZ
3DK41DS	1	4	4	5,809	1,127	3,299	3,699	-	-	DN150 (6)	160	1,015	1,200	57	55
3DK51DS	1	5	5	6,910	1,127	3,343	3,743	4,183	-	DN150 (6)	180	1,220	1,400	58	56
3DK71DS	1	7	7	9,157	1,127	3,481	3,881	4,321	-	DN200 (8)	255	1,680	2,000	60	58
3DK101DS	1	10	10	12,460	1,127	3,612	4,012	4,452	-	DN200 (8)	350	2,315	2,700	61	59
3DK42DS	2	4	8	5,809	2,235	3,299	3,699	-	-	DN150 (6)	315	1,810	2,200	60	58
3DK52DS	2	5	10	6,910	2,235	3,343	3,743	4,183	5,223	DN150 (6)	360	2,165	2,600	61	59
3DK72DS	2	7	14	9,157	2,235	3,481	3,881	4,321	5,361	DN200 (8)	510	2,965	3,500	62	60
3DK102DS	2	10	20	12,460	2,235	3,612	4,012	4,452	5,492	DN200 (8)	700	3,985	4,700	64	62
3DK41DP	1	4	4	5,809	1,127	3,299	3,699	-	-	DN150 (6)	160	975	1,200	57	55
3DK51DP	1	5	5	6,910	1,127	3,343	3,743	4,183	-	DN150 (6)	180	1,180	1,400	58	56
3DK71DP	1	7	7	9,157	1,127	3,481	3,881	4,321	-	DN200 (8)	255	1,640	1,900	60	58
3DK101DP	1	10	10	12,460	1,127	3,612	4,012	4,452	-	DN200 (8)	350	2,275	2,700	61	59
3DK42DP	2	4	8	5,809	2,235	3,299	3,699	-	-	DN150 (6)	315	1,750	2,100	60	58
3DK52DP	2	5	10	6,910	2,235	3,343	3,743	4,183	5,223	DN150 (6)	360	2,105	2,500	61	59
3DK72DP	2	7	14	9,157	2,235	3,481	3,881	4,321	5,361	DN200 (8)	510	2,905	3,500	62	60
3DK102DP	2	10	20	12,460	2,235	3,612	4,012	4,452	5,492	DN200 (8)	700	3,920	4,700	64	62

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<sup>2</sup> Extended support leg requirements (+40 cm, +84 cm or +188 cm) are determined by Frigel.

<sup>3</sup> Models with 188 cm extended legs have DN300 (12 inch) connections. Adiabatic chamber spray connections are ¾ inch BSP per row and are accessible at both ends of each row. Unused connections must be plugged. Adiabatic chamber drain connections are 38 mm ID hose barb.

<sup>4</sup> This is also the approximate rigging weight, excluding the additional weight of the optional extended support legs..

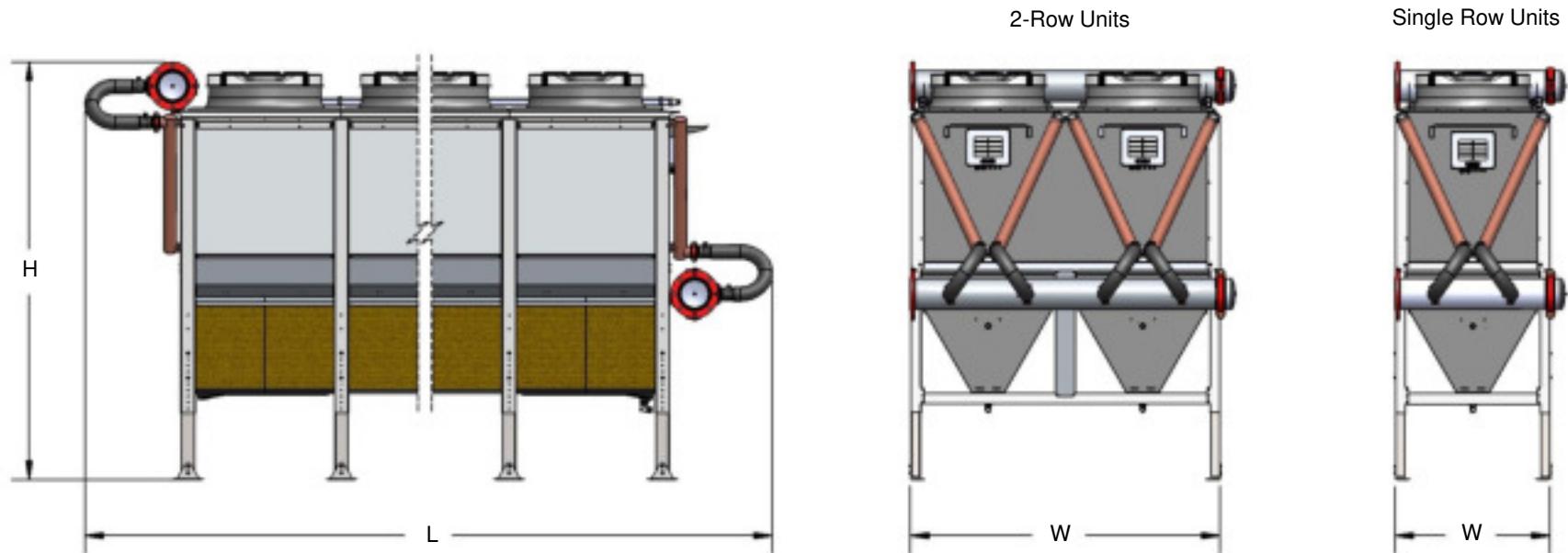
<sup>5</sup> Operating weights do not included external flooded piping or support steel structures.

<sup>6</sup> EC = brushless variable speed fan motors. EZ = brushless variable speed fan motors with exhaust diffusers.



## Parallel Coil Configuration

Glycol systems or water systems (no glycol) in non-freezing climates







## Parallel Coil Configuration

Glycol systems or water systems (no glycol) in non-freezing climates

MECHANICAL <sup>1</sup>															
Model	Rows	Fans Per Row	Total Fans	Dimensions <sup>2</sup> mm						Victaulic™ Connections <sup>4</sup> mm (in)	Internal Volume liter	Approximate Weights		Sound Level dB(A) @ 10 m	
				L	W	H <sup>3</sup>	H <sup>3</sup> (+40)	H <sup>3</sup> (+84)	H <sup>3</sup> (+188)			Shipping <sup>5</sup> kg	Operating <sup>6</sup> kg	Fan Type <sup>7</sup>	
														EC	EZ
3DK11P	1	1	1	2,523	1,127	2,923	3,323	-	-	DN100 (4)	70	365	500	51	49
3DK21P	1	2	2	3,643	1,127	2,923	3,323	-	-	DN100 (4)	120	565	700	54	52
3DK31P	1	3	3	4,743	1,127	2,923	3,323	-	-	DN100 (4)	140	725	900	56	54
3DK41P	1	4	4	5,902	1,127	2,929	3,329	-	-	DN150 (6)	160	940	1,200	57	55
3DK51P	1	5	5	7,020	1,127	2,929	3,329	3,769	-	DN150 (6)	180	1,145	1,400	58	56
3DK71P	1	7	7	9,225	1,127	2,987	3,387	3,827	-	DN200 (8)	255	1,630	1,900	60	58
3DK101P	1	10	10	12,525	1,127	2,987	3,387	3,827	-	DN200 (8)	350	2,275	2,700	61	59
3DK22P	2	2	4	3,643	2,235	2,923	3,323	-	-	DN100 (4)	235	1,040	1,300	57	55
3DK32P	2	3	6	4,743	2,235	2,923	3,323	-	-	DN100 (4)	275	1,285	1,600	59	57
3DK42P	2	4	8	5,902	2,235	2,929	3,329	-	-	DN150 (6)	315	1,640	2,000	60	58
3DK52P	2	5	10	7,020	2,235	2,929	3,329	3,769	4,809	DN150 (6)	360	1,970	2,400	61	59
3DK72P	2	7	14	9,225	2,235	2,987	3,387	3,827	4,867	DN200 (8)	510	2,815	3,400	62	60
3DK102P	2	10	20	12,525	2,235	2,987	3,387	3,827	4,867	DN200 (8)	700	3,895	4,700	64	62

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<sup>2</sup> Extended support leg requirements (+40 cm, +84 cm or +188 cm) are determined by Frigel.

<sup>3</sup> Add 52 mm for models with EZ fans (11, 21, 22, 31 & 32). Add 36 mm for models with EZ fans (41, 42, 51 & 52).

<sup>4</sup> Models with 188 cm extended legs have DN300 (12 inch) connections. Adiabatic chamber spray connections are ¾ inch BSP per row and are accessible at both ends of each row. Unused connections must be plugged. Adiabatic chamber drain connections are 38 mm ID hose barb.

<sup>5</sup> This is also the approximate rigging weight, excluding the additional weight of the optional extended support legs.

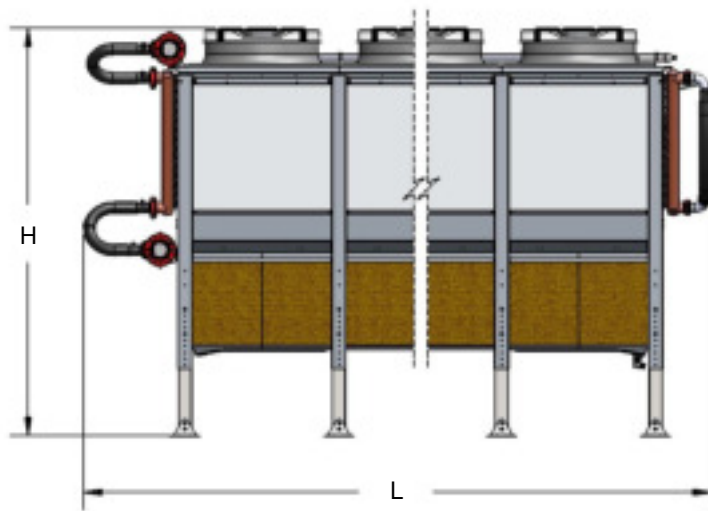
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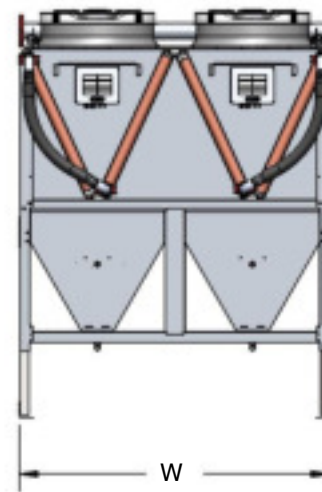


## Series Coil Configuration

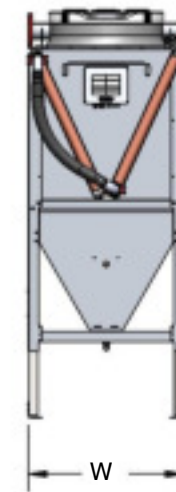
Glycol systems or water systems (no glycol) in non-freezing climates



2-Row Units



Single Row Units







## Series Coil Configuration

Glycol systems or water systems (no glycol) in non-freezing climates

MECHANICAL <sup>1</sup>															
Model	Rows	Fans Per Row	Total Fans	Dimensions <sup>2</sup> mm						Victaulic™ Connections <sup>4</sup> mm (in)	Internal Volume liter	Approximate Weights		Sound Level dB(A) @ 10 m	
				L	W	H <sup>3</sup>	H <sup>3</sup> (+40)	H <sup>3</sup> (+84)	H <sup>3</sup> (+188)			Shipping <sup>5</sup> kg	Operating <sup>6</sup> kg	Fan Type <sup>7</sup>	
														EC	EZ
3DK11S	1	1	1	1,722	1,127	2,925	3,325	-	-	DN65 (2½)	70	320	400	51	49
3DK21S	1	2	2	3,322	1,127	2,925	3,325	-	-	DN100 (4)	120	565	700	54	52
3DK31S	1	3	3	4,422	1,127	2,925	3,325	-	-	DN100 (4)	140	735	900	56	54
3DK41S	1	4	4	5,580	1,127	2,925	3,325	-	-	DN150 (6)	160	940	1,200	57	55
3DK51S	1	5	5	6,680	1,127	2,925	3,325	3,765	-	DN150 (6)	180	1,205	1,400	58	56
3DK71S	1	7	7	8,924	1,127	2,925	3,325	3,765	-	DN200 (8)	255	1,630	1,900	60	58
3DK101S	1	10	10	12,224	1,127	2,925	3,325	3,765	-	DN200 (8)	350	2,270	2,700	61	59
3DK22S	2	2	4	3,322	2,235	2,925	3,325	-	-	DN100 (4)	235	1,040	1,300	57	55
3DK32S	2	3	6	4,422	2,235	2,925	3,325	-	-	DN100 (4)	275	1,195	1,500	59	57
3DK42S	2	4	8	5,580	2,235	2,925	3,325	-	-	DN150 (6)	315	1,655	2,000	60	58
3DK52S	2	5	10	6,680	2,235	2,925	3,325	3,765	4,805	DN150 (6)	360	1,965	2,400	61	59
3DK72S	2	7	14	8,924	2,235	2,925	3,325	3,765	4,805	DN200 (8)	510	2,830	3,400	62	60
3DK102S	2	10	20	12,224	2,235	2,925	3,325	3,765	4,805	DN200 (8)	700	3,895	4,700	64	62

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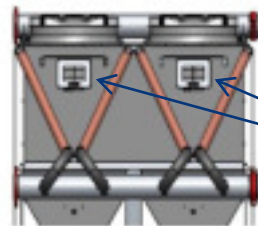


## All Configurations

ELECTRICAL <sup>1</sup>							
Model	Rows	Fans Per Row	Total Fans	Power Input <sup>2</sup> kW			
				Per Row	Per Unit	Per Row	Per Unit
				EC Fans		EZ Fans	
3DK11	1	1	1	2.10	2.10	1.75	1.75
3DK21	1	2	2	4.20	4.20	3.50	3.50
3DK31	1	3	3	6.30	6.30	5.25	5.25
3DK41	1	4	4	8.40	8.40	7.00	7.00
3DK51	1	5	5	10.50	10.50	8.75	8.75
3DK71	1	7	7	14.70	14.70	12.25	12.25
3DK101	1	10	10	21.00	21.00	17.50	17.50
3DK22	2	2	4	4.20	8.40	3.50	7.00
3DK32	2	3	6	6.30	12.60	5.25	10.50
3DK42	2	4	8	8.40	16.80	7.00	14.00
3DK52	2	5	10	10.50	21.00	8.75	17.50
3DK72	2	7	14	14.70	29.40	12.25	24.50
3DK102	2	10	20	21.00	42.00	17.50	35.00

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<sup>2</sup> Motors are rated for 380-480 volt, 50/60 hz. An external transformer is required per row for 220 volt 3-phase power supply. Amps = (kW x 1,000) / (volts x 1.47).



One power supply is required for each row of fans