

Introduction of Immersion-energy Dry Cooler

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Feature:

1. Refrigerants include but are not limited to chilled water, brine, BC-888, propylene glycol, ethylene glycol.
2. Copper tube aluminum fin or copper tube copper fin, casing is stainless steel and galvanized steel coating.
3. The max refrigerant volume is 150 m³/h.
4. **Especially recommended for currency mining cooling.**

www.immersion-energy.com 

Standard Condition

Relative Humidity 40%

Atmosphere pressure 1 bar(sea level)

20% glycol, water, ambient temperature 35°C

Application benefits/ Features

High efficiency heat exchanger

- Capacity designs for maximizing the heat transfer relative to the energy consumption of the fan
- Tube and tube coupling design for low pressure drop in the coil on the media sides (maximum 100 KPa at water designing condition)
- Venttech thermodynamic and aerodynamic designing software is long year tested and proved in Germany

Reliable

- We facilitate you to have a long lasting and low maintenance operation
- Durable material and rigid enclosure with hard gloss powder coated finish
- Protective enclosure for both manifolds and U-bends
- Unit designs for outdoor installation
- 100% leakage tested at 31bar

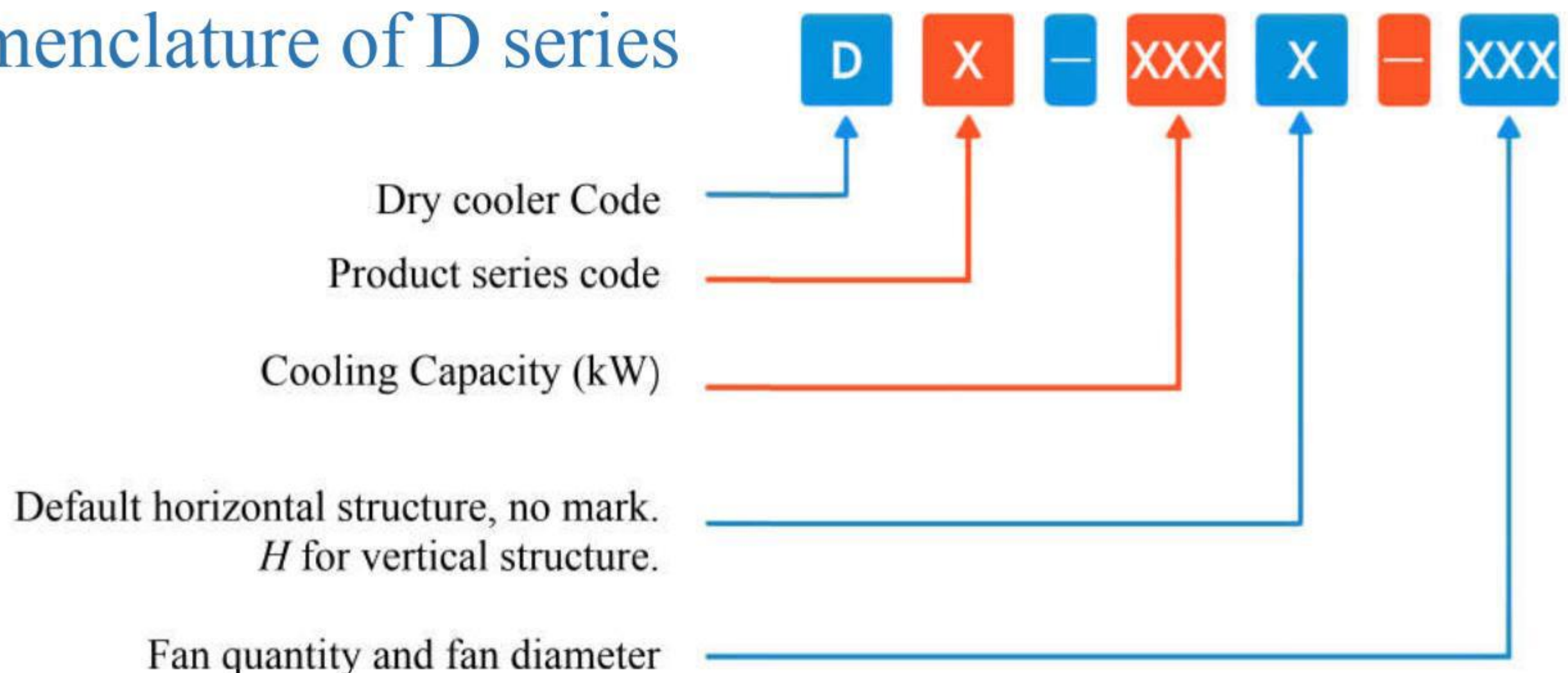
Fan

- Choose only low specific energy consumption fans
- Fan nozzle designs for maximum air flow and air throw
- Our fans from the world's leading manufacturer are practically proved to be reliable in operation and long lasting
- Motor: protection class IP 54 and insulation class F
- Air separator for each fan

Options

- Coil design for refrigerants: water, oil, glycol
- Multiple circuits
- Sub-Cooling circuits
- Stainless steel or aluminum casing
- Coated aluminum or copper fins
- Explosion proof motor
- Customized fin spacing

Nomenclature of D series



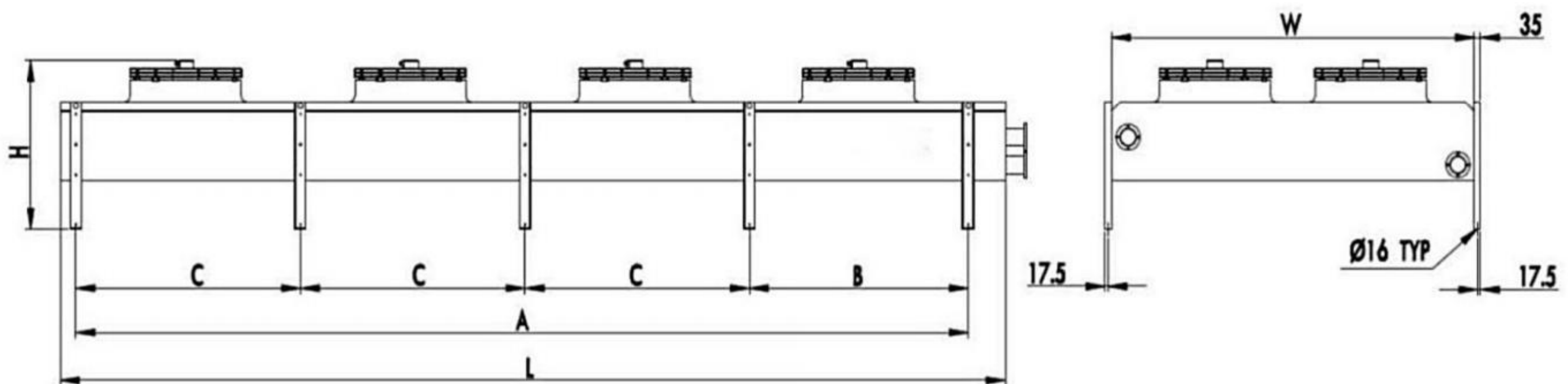


Dry Cooler D1 Series

Dry Cooler Fin Spacing 2.1mm															
Type				D1-005-1x350	D1-006-1x350	D1-007-1x350	D1-009-1x450	D1-011-1x450	D1-013-1x450	D1-014-1x500	D1-017-1x500	D1-020-1x500			
Capacity	Water	35°C Outdoor temp.	inlet 45°C Δ	KW	4.89	5.90	6.83	9.39	10.99	13.33	14.32	17.01	19.80		
			outlet 40°C Y		4.72	5.69	6.69	8.90	10.61	13.05	13.91	16.11	19.29		
	20% Glycol		inlet 45°C Δ		4.72	5.69	6.69	8.90	10.61	13.05	13.91	16.11	19.29		
			outlet 40°C Y		4.72	5.69	6.69	8.90	10.61	13.05	13.91	16.11	19.29		
Medium		Water Flow		M ³ /h	0.85	1.03	1.20	1.63	1.91	2.30	2.50	3.00	3.50		
		Pressure Drop		kPa	36.00	31.00	58.00	25.00	40	80	50	60	40		
Air Flow			Δ	M ³ /h	2828	2712	2492	6199	5827	5225	8469	8168	7601		
			Y		2828	2712	2492	6199	5827	5225	8469	8168	7601		
Fan Motor			Phase		1	1	1	3	3	3	3	3	3		
			Δ	W	140	140	140	540	540	540	830	830	830		
			Y		140	140	140	540	540	540	830	830	830		
Fan			Δ	A	0.60	0.60	0.60	1.10	1.10	1.10	1.45	1.45	1.45		
			Y		0.60	0.60	0.60	1.10	1.10	1.10	1.45	1.45	1.45		
Fan			No.x φ	1x1x350	1x1x350	1x1x350	1x1x450	1x1x450	1x1x450	1x1x500	1x1x500	1x1x500	1x1x500		
Sound Pressure Level			Δ	dB(A)	31	31	31	43	43	43	49	49	49		
			Y		10m	31	31	31	43	43	43	49	49	49	
Dimension			L	mm	870	870	870	1020	1020	1020	1220	1220	1220		
			W	mm	525	525	525	625	625	625	825	825	825	825	
			H	mm	797	797	797	820	820	820	870	870	870	870	
			A	mm	690	690	690	840	840	840	1040	1040	1040	1040	
			B	mm	--	--	--	--	--	--	--	--	--	--	--
			C	mm	--	--	--	--	--	--	--	--	--	--	--
			D	mm	490	490	490	490	490	490	490	490	490	490	490
Inlet φ			mm	3/4"	3/4"	3/4"	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"			
Outlet φ			mm	3/4"	3/4"	3/4"	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"			
Product Weight (empty)			kg	38	42	48	55	60	67	75	82	91			

Standard D1 dry cooler is vertical air discharge. For the horizontal, please add (H) in nomenclature, for example: D1-005H-1x350

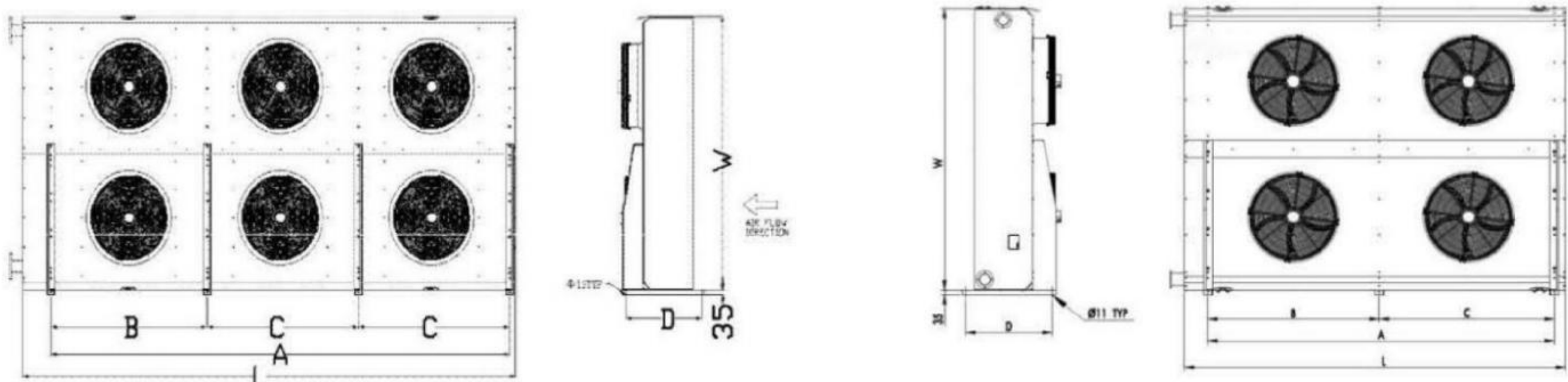
Schematic



Dry Cooler Fin Spacing 2.1mm															
Type			D1-028-1x630	D1-034-1x630	D1-041-1x630	D1-058-2x630	D1-068-2x630	D1-083-2x630	D1-106-3x630	D1-124-3x630	D1-137-4x630				
Capacity	Water	35°C Outdoor temp.	inlet 45°C Δ	28.09	33.62	41.21	58.15	68.48	82.96	105.68	123.65	137.29			
			outlet 40°C Y	23.83	27.87	33.35	49.31	56.77	67.29	88.00	100.23	113.90			
	20% Glycol		inlet 45°C Δ	26.76	32.42	40.26	56.39	66.53	80.66	102.54	120.23	133.30			
			outlet 40°C Y	22.71	26.90	32.61	47.84	55.20	65.48	85.44	97.54	110.66			
Medium		Water Flow		M ³ /h	5.00	6.00	7.20	10.00	12.00	14.50	18.40	21.50	24.00		
		Pressure Drop		kPa	50	46	82	85	73	49	70	47	70		
Air Flow			Δ	M ³ /h	19029	18289	16864	38056	36576	33728	54861	50593	73152		
			Y	M ³ /h	14664	13945	12817	29327	27889	25633	41830	38450	55777		
Fan Motor			Phase		3	3	3	3	3	3	3	3			
			W		Δ	W	2750	2750	2750	5500	5500	5500	8250	8250	11000
					Y	W	1750	1750	1750	3500	3500	3500	5250	5250	7000
			A		Δ	A	5.10	5.10	5.10	10.2	10.2	10.2	15.3	15.3	20.4
Y	A	3.00			3.00	3.00	6.00	6.00	6.00	9.00	9.00	12.00			
Fan		No. x φ	1x1x630	1x1x630	1x1x630	2x1x630	2x1x630	2x1x630	3x1x630	3x1x630	2x2x630				
Sound Pressure Level			Δ dB(A)		59	59	59	61	61	61	63	63	64		
			Y 10m		52	52	52	54	54	54	56	56	57		
Dimension			L mm		1580	1580	1580	2880	2880	2880	4180	4180	2930		
			W mm		1085	1085	1085	1085	1085	1085	1085	1085	1085	2100	
			H mm		920	920	920	920	920	920	920	920	920	1070	
			A mm		1340	1340	1340	--	--	--	--	--	--	--	
			B mm		--	--	--	1340	1340	1340	1340	1340	1340	1340	
			C mm		--	--	--	1300	1300	1300	1300	1300	1300	1300	
			D mm		640	640	640	640	640	640	640	640	640	640	
Inlet φ		mm	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"	2-1/2"				
Outlet φ		mm	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"	2-1/2"	2-1/2"				
Product Weight (empty)		kg	132	132	138	156	237	261	303	379	444				

Standard D1 dry cooler is vertical air discharge. For the horizontal, please add (H) in nomenclature, for example: D1-005H-1X350

Schematic



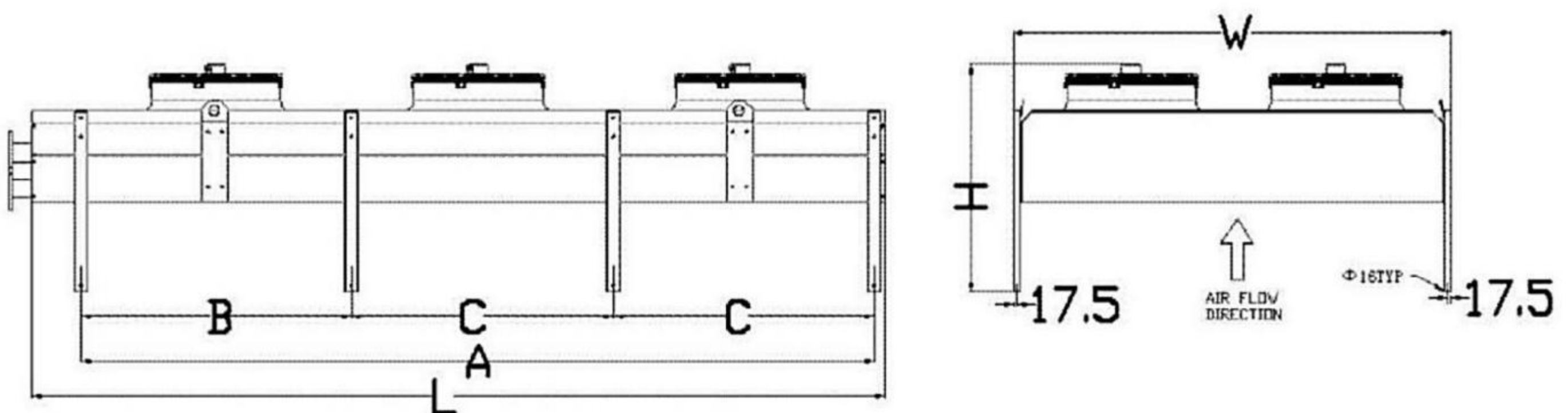


Dry Cooler D1 Series

Dry Cooler Fin Spacing 2.1mm															
Type			D1-166-4x630	D1-211-6x630	D1-247-6x630	D1-286-8x630	D1-334-8x630	D1-360-10x630	D1-415-10x630	D1-502-12x630	D1-565-14x630	D1-649-16x630			
Capacity	Water	inlet 45°C Δ	165.92	211.36	247.3	286.15	334.49	359.72	415.31	502.25	565.18	649.48			
		outlet 40°C Y	134.59	176.00	200.45	238.3	270.889	298.57	335.225	405.20	459.3	527.59			
	20% Glycol	inlet 45°C Δ	161.32	205.08	240.46	280.05	327.72	351.3	406.48	493.40	554.21	638.44			
		outlet 40°C Y	130.96	170.87	195.07	233.18	265.64	291.81	328.48	398.45	450.87	519.13			
Medium	Water Flow		m ³ /h	29.00	37	43	50	58	63	72	88	113			
	Pressure Drop		kPa	50	70	47	97	95	92	70	97	96	95		
Air Flow			Δ	67455	109723	101185	146293	134908	179502	164442	197326	230584	263503		
			Y	51265	83661	76900	111544	102528	136437	124680	149612	174710	199665		
Fan Motor			Phase		3	3	3	3	3	3	3	3			
			Δ	W	1100	16500	16500	22000	22000	27500	27500	33000	38500	44000	
					Y	700	10500	10500	14000	14000	17500	17500	21000	24500	28000
			Δ	A	20.4	30.6	30.6	40.8	40.8	51.00	51.00	61.20	71.40	81.60	
Y	12.00	18.00			18.00	24.00	24.00	30.00	30.00	36.00	42.00	48.00			
Fan			No. x φ	1x1x630	2x2x630	2x3x630	2x3x630	2x4x630	2x4x630	2x5x630	2x5x630	2x6x630	2x7x630		
Sound Pressure Level			Δ	64	66	66	67	67	68	68	68	69	69		
			Y	10m	57	59	59	60	60	61	61	61	62	62	
Dimension			L	mm	2930	4230	4230	5530	5530	6830	6830	8130	9430	10730	
			W	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
			H	mm	1070	1070	1070	1070	1070	1120	1120	1120	1120	1120	1120
			A	mm	--	--	--	--	--	--	--	--	--	--	--
			B	mm	1340	1340	1340	1340	1340	1340	1340	1340	1340	1340	1340
			C	mm	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
			D	mm	640	640	640	640	640	640	640	640	640	640	640
Inlet φ			mm	3"	3"	3"	DN100	DN100	DN100	DN125	DN125	2xDN125	2xDN125		
Outlet φ			mm	3"	3"	3"	DN100	DN100	DN100	DN125	DN125	2xDN125	2xDN125		
Product Weight (empty)			kg	132	658	689	760	1105	1270	1320	1420	1584	1848		

Standard D1 dry cooler is vertical air discharge. For the horizontal, please add (H) in nomenclature, for example: D1-005H-1x350

Schematic



D series Images



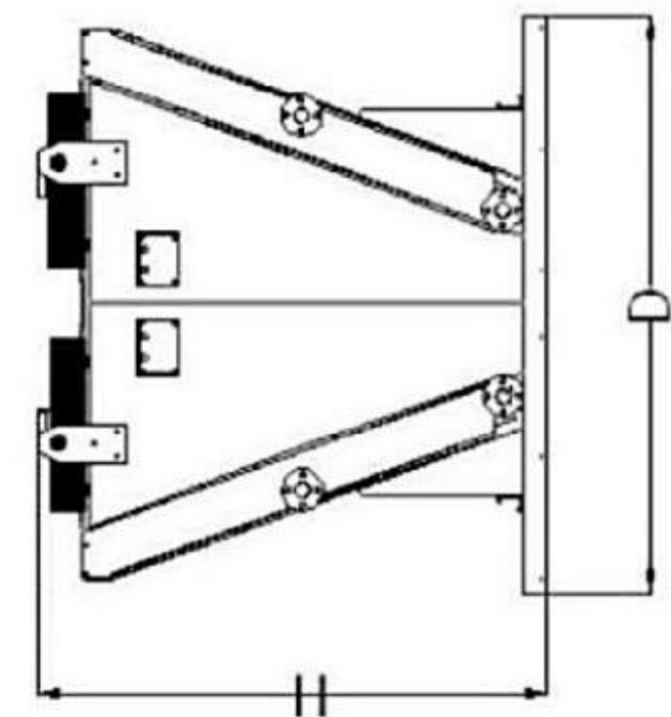
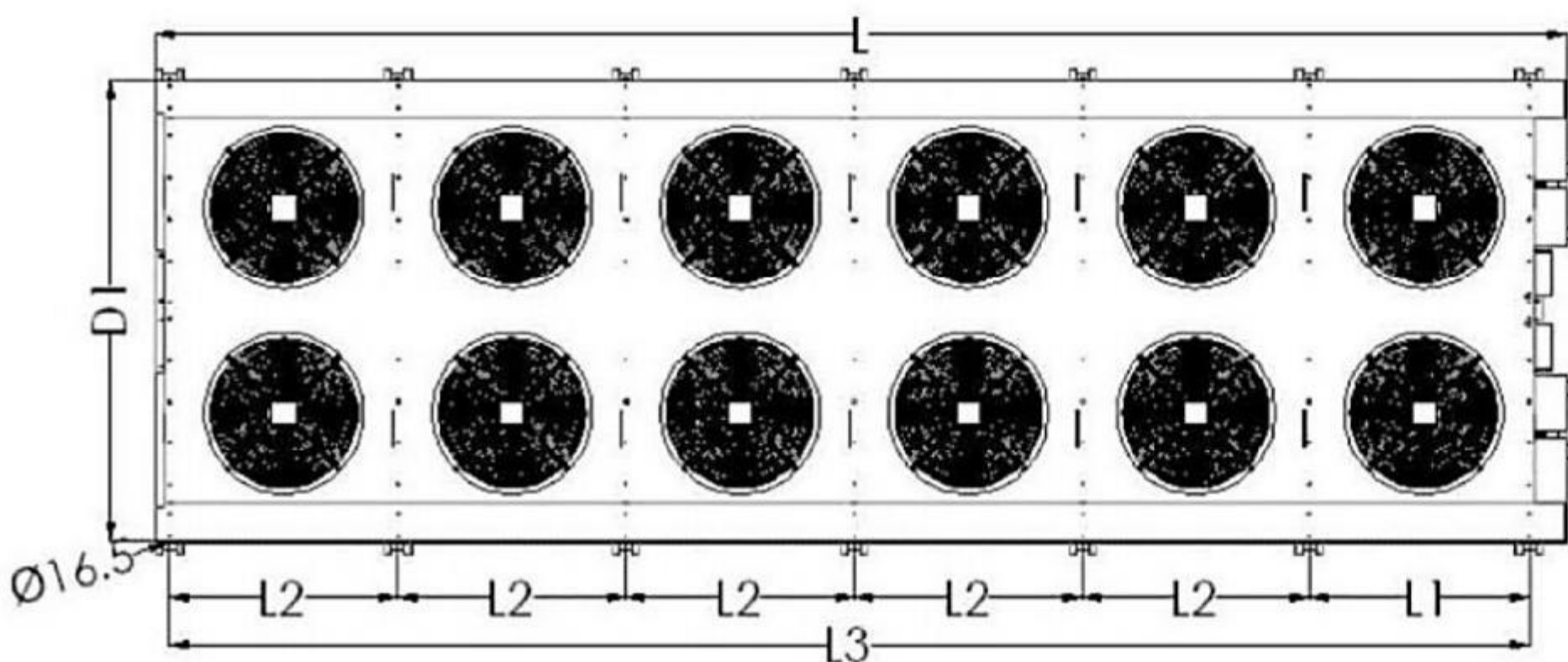


Dry Cooler D2 Series

Dry Cooler Fin Spacing 2.1mm

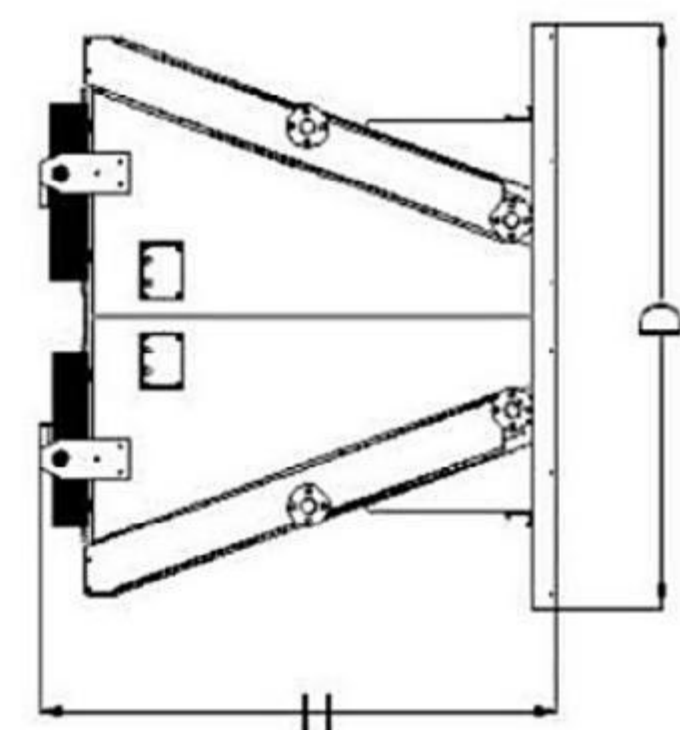
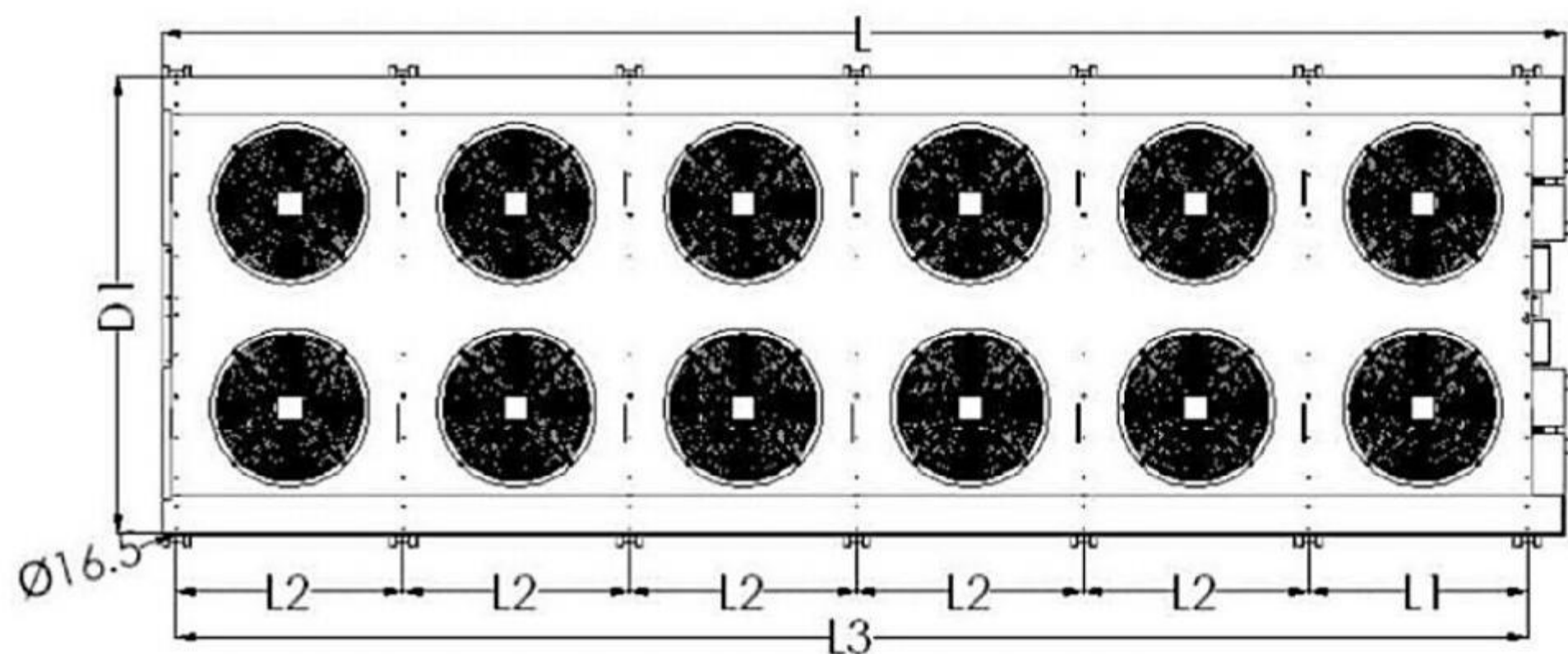
Type			D2-148-4x630	D2-166-4x630	D2-175-4x630	D2-228-6x630	D2-250-6x630	D2-276-6x630	D2-310-8x630	D2-343-8x630	D2-364-8x630	D2-392-10x630	
Capacity	Water	kW	147.99	165.85	175.21	227.85	250.42	276.53	309.85	342.73	364.07	391.99	
	20% Et. Glycol	kW	142.42	161.57	170.91	219.09	244.69	270.22	301.18	333.55	354.64	383.3	
Air Flow	m ³ /h		76459	74341	72134	114686	111511	108188	152911	148675	144255	191136	
Fan	No.xφ		2x2x630	2x2x630	2x2x630	2x3x630	2x3x630	2x3x630	2x4x630	2x4x630	2x4x630	2x5x630	
Fan Motor 3Phase/400V/50Hz	A		20.4	20.4	20.4	30.6	30.6	30.6	40.8	40.8	40.8	51.00	
	kW		11.00	11.00	11.00	16.50	16.50	16.50	22.00	22.00	22.00	27.50	
Sound Pressure Level	dB(A) 10m		64	64	64	66	66	66	67	67	67	68	
Dimension	L	mm	2186	2186	2186	3250	3250	3250	4250	4250	4250	5250	
	H	mm	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874	
	D	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	
	D1	mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	
	L1	mm	963	963	963	963	963	963	963	963	963	963	
	L2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	L3	mm	1963	1963	1963	2963	2963	2963	3963	3963	3963	4963	
Connections	Inlet φ	mm	2xDN50	2xDN65	2xDN65	2xDN65	2xDN80	2xDN80	2xDN80	2xDN80	2xDN100	2xDN100	
	Outlet φ	mm	2xDN50	2xDN65	2xDN65	2xDN65	2xDN80	2xDN80	2xDN80	2xDN80	2xDN100	2xDN100	
Product Weight (empty)			kg	769	811	853	1134	1197	1261	1498	1589	1673	1864

Schematic



Dry Cooler Fin Spacing 2.1mm												
Type			D2-148-4x630	D2-166-4x630	D2-175-4x630	D2-228-6x630	D2-250-6x630	D2-276-6x630	D2-310-8x630	D2-343-8x630	D2-364-8x630	D2-392-10x630
Capacity	Water	kW	426.15	444.78	516.67	524.70	601.41	595.59	692.11	676.02	783.03	921.23
	20% Et. Glycol	kW	413.85	427.83	504.38	507.90	586.16	572.94	676.71	653.42	767.64	905.78
Air Flow	m ³ /h		76459	182123	229377	218543	267604	254816	301325	290850	338987	327612
Fan	No.xφ		2x2x630	2x5x630	2x6x630	2x6x630	2x7x630	2x7x630	2x8x630	2x8x630	2x9x630	2x9x630
Fan Motor 3Phase/400V/50Hz		A	20.4	51.00	61.20	61.20	71.40	71.40	81.60	81.60	91.80	91.80
		kW	11.00	27.50	33.00	33.00	38.50	38.50	44.00	44.00	49.50	49.50
Sound Pressure Level	dB(A) 10m		64	68	69	69	70	70	71	71	72	72
Dimension	L	mm	5250	6250	6250	7250	7250	8250	8250	9250	9250	10250
	H	mm	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874
	D	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	D1	mm	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	L1	mm	963	963	963	963	963	963	963	963	963	963
	L2	mm	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	L3	mm	4963	5963	5963	6963	6963	7963	7963	8963	8963	9963
Connections	Inlet φ	mm	2xDN100	2xDN100	2xDN100	2xDN100	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	4xDN1100
	Outlet φ	mm	2xDN100	2xDN100	2xDN100	2xDN100	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	4xDN1100
Product Weight (empty)	kg		769	2193	2224	2617	2586	3259	3244	3728	3643	4226

Schematic

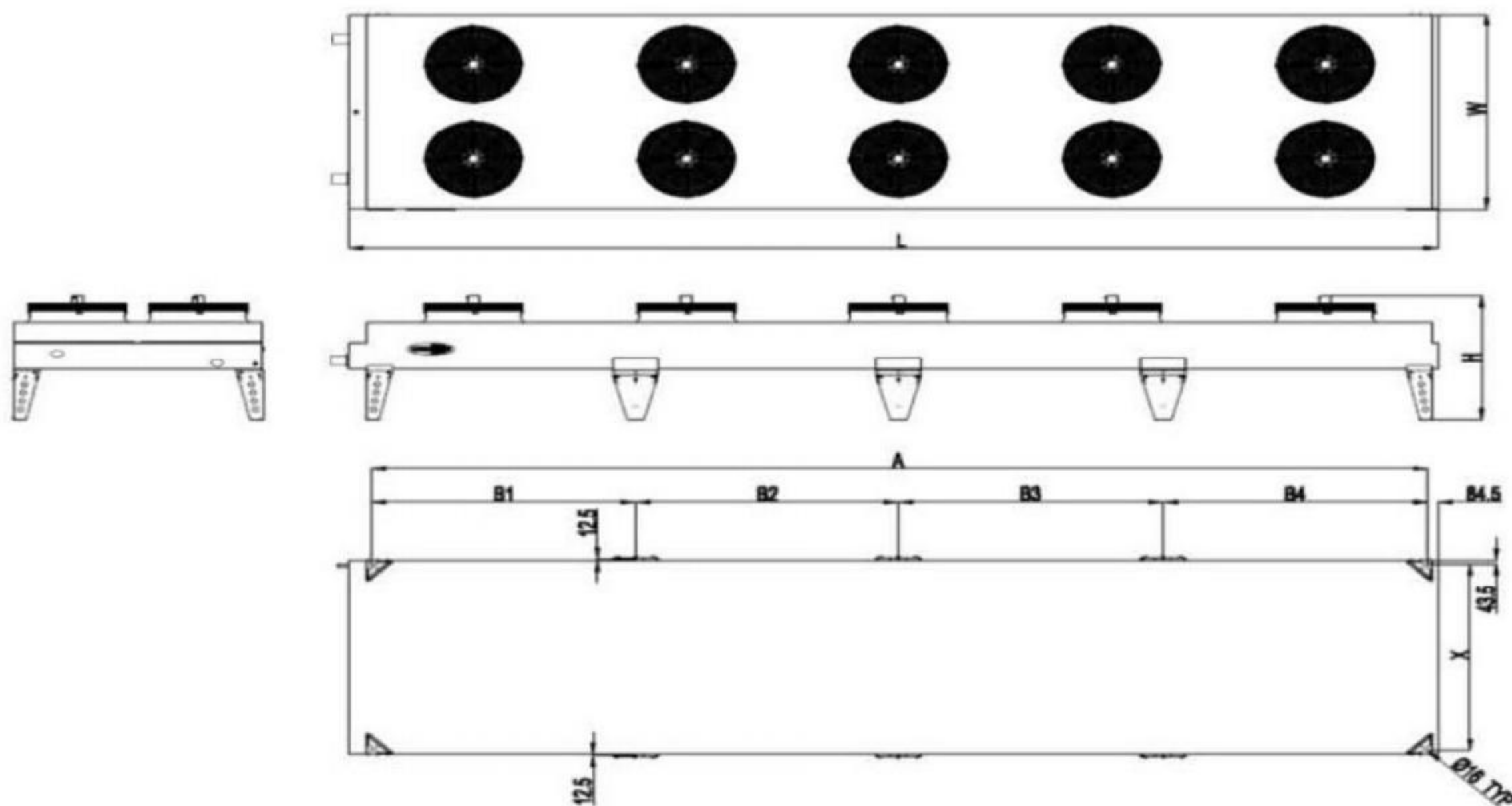




Dry Cooler D3 Series

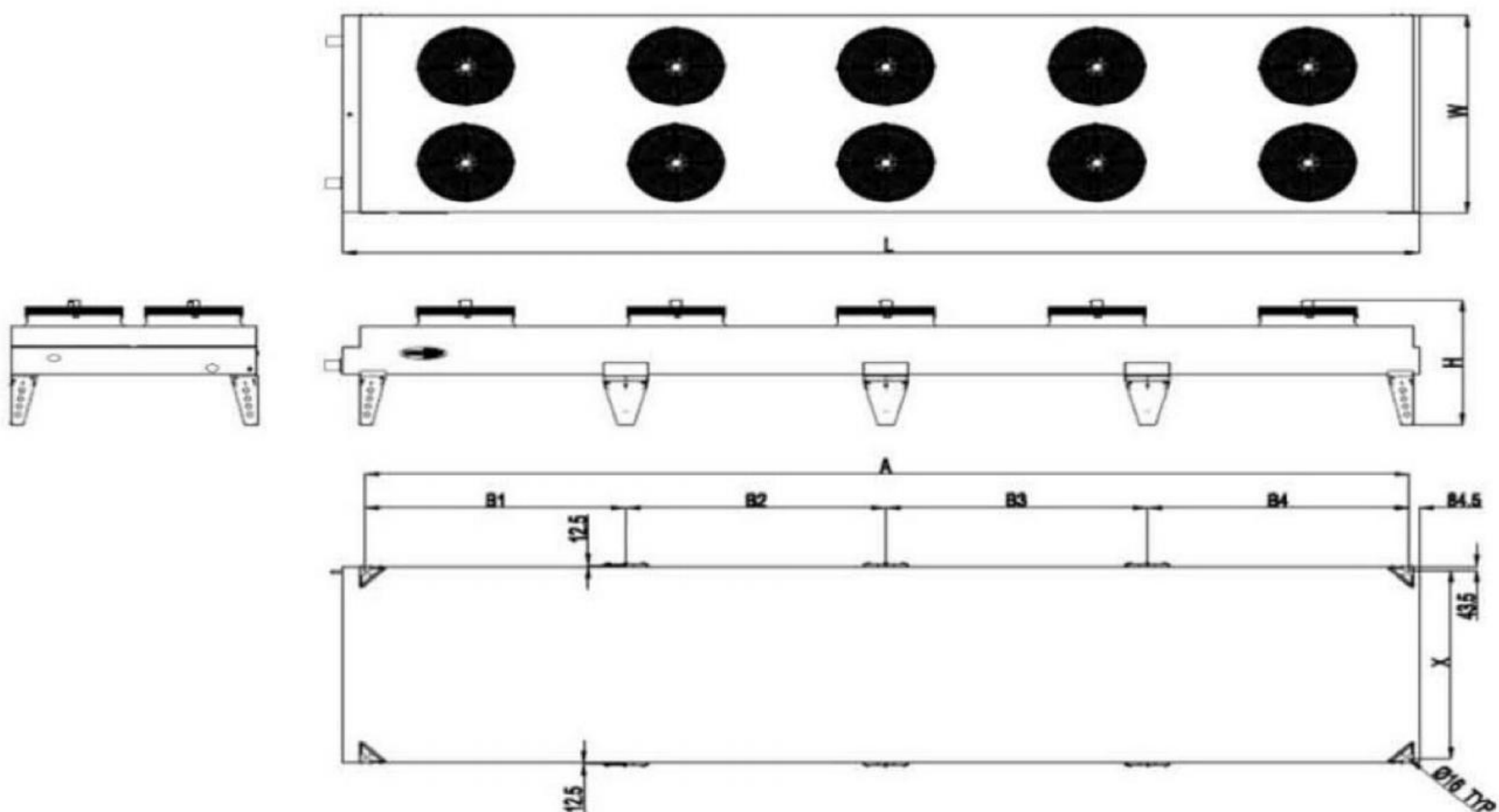
Dry Cooler Fin Spacing 2.1mm

Type		D3-042-1x800	D3-046-1x800	D3-051-1x800	D3-087-2x800	D3-094-2x800	D3-103-2x800	D3-125-3x800	D3-146-3x800	D3-153-3x800	D3-175-4x800	D3-188-4x800
Capacity	Water 35°C Outdoor temp.	42.1	46.1	50.6	87.3	93.6	102.9	124.9	145.9	153.3	174.5	187.9
	20% Glycol inlet 45°C outlet 40°C	40.8	45.1	49.7	84.5	91.8	100.9	119.4	143.0	150.4	168.9	184.3
Medium	Water Flow	7.3	8.0	8.8	15.2	16.3	17.9	21.7	25.4	26.6	30.3	32.7
	Pressure Drop	49	69	97	48	98	93	21	97	89	48	98
Air Flow		21454	20531	19696	42906	41061	39390	64364	61585	59087	85811	82120
Fan Motor 3Phase/400V/50Hz	W	1800	1800	1800	3600	3600	3600	5400	5400	5400	7200	7200
	A	3.8	3.8	3.8	7.6	7.6	7.6	11.4	11.4	11.4	15.2	15.2
Fan	No.x φ	1x1x800	1x1x800	1x1x800	1x2x800	1x2x800	1x2x800	1x3x800	1x3x800	1x3x800	2x2x800	2x2x800
Sound Pressure Level	dB(A) 10m	50.0	50.0	50.0	51.0	51.0	5 1.0	53.0	53.0	53.0	54.0	54.0
Dimension	L mm	2000	2000	2000	3800	3800	3800	5600	5600	5600	3800	3800
	W mm	1084	1084	1084	1084	1084	1084	1084	1084	2108	2108	2108
	H mm	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
	A mm	1728	1728	1728	3528	3528	3528	5328	5328	5328	3528	3528
	B1 mm	--	--	--	1764	1764	1764	1776	1776	1776	1764	1764
	B2 mm	--	--	--	1764	1764	1764	1776	1776	1776	1764	1764
	B3 mm	--	--	--	--	--	--	1776	1776	1776	--	--
	B4 mm	--	--	--	--	--	--	--	--	--	--	--
	X mm	997	997	997	997	997	997	997	997	997	2021	2021
Product Weight (empty)	kg	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	4"	4"
Inlet φ	mm	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	4"	4"
Outlet φ	mm	225	233	241	357	373	392	796	527	749	812	1062



Dry Cooler Fin Spacing 2.1mm

Type			D4-176-4x800	D4-191-4x800	D4-205-4x800	D4-267-6x800	D4-291-6x800	D4-315-6x800	D4-361-8x800	D4-394-8x800	D4-414-8x800	D4-176-4x800	D4-191-4x800		
Capacity	Water	35°C Outdoor temp.	205.8	249.8	291.9	306.6	340.5	389.1	406.0	431.3	490.6	511.6	606.9		
	20% Glycol	inlet 45°C outlet 40°C	201.9	238.8	286.1	300.8	329.7	381.5	398.5	420.5	482.9	504.1	597.5		
Medium	Water Flow		35.8	43.4	50.7	53.3	59.2	67.6	70.6	75.0	85.3	88.9	105.5		
	Pressure Drop		92	21	98	88	46	99	79	82	99	98	97		
Air Flow			78781	128728	123170	118174	171631	160328	153274	214533	200405	191587	227449		
Fan Motor 3Phase/400V/50Hz			W	7200	10800	10800	10800	14400	14400	14400	18000	18000	18000	21600	
			A	15.2	22.8	22.8	22.8	22.80	30.40	30.40	38.00	38.00	38.00	45.60	
Fan			No. x φ	2x2x800	2x3x800	2x3x800	2x3x800	2x4x800	2x4x800	2x4x800	2x5x800	2x5x800	2x5x800	2x6x800	
Sound Pressure Level			dB(A) 10m	54.0	56.0	56.0	56.0	58.0	58.0	58.0	60.0	60.0	60.0	62.0	
Dimension			L mm	3800	5600	5600	5600	7400	7400	7400	9200	9200	9200	11000	
			W mm	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108	2108
			H mm	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328	1328
Inlet φ			mm	4"	DN125	DN125	DN125	DN125	2x4"	2x4"	2x4"	2xDN125	2xDN125	2xDN125	
Outlet φ			mm	4"	DN125	DN125	DN125	DN125	2x4"	2x4"	2x4"	2xDN125	2xDN125	2xDN125	
Product Weight (empty)			kg	1127	1373	1462	1704	1785	1816	2150	2230	2380	2590	2780	



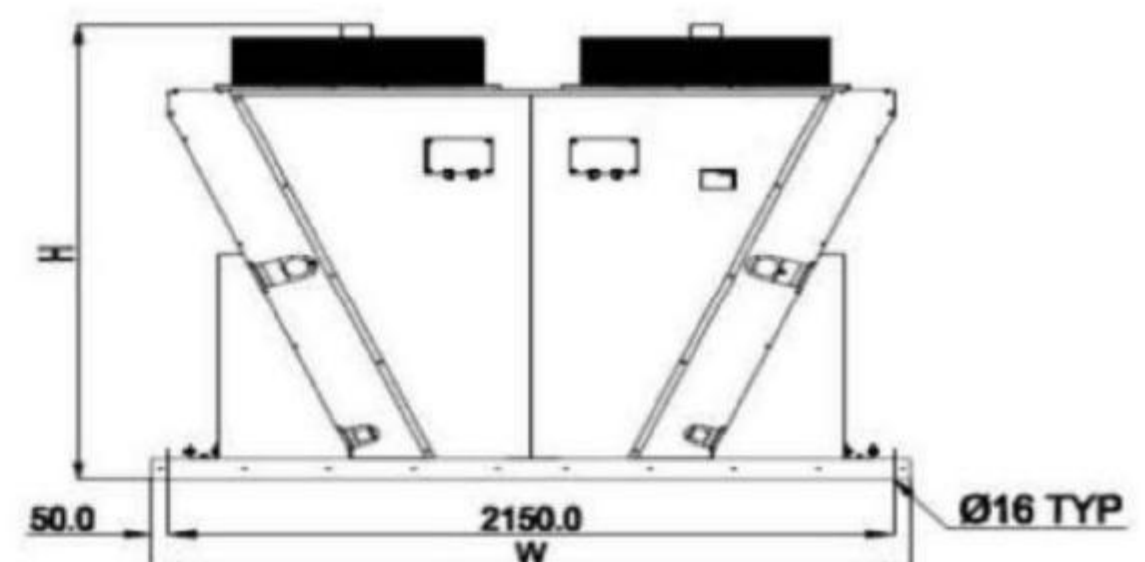
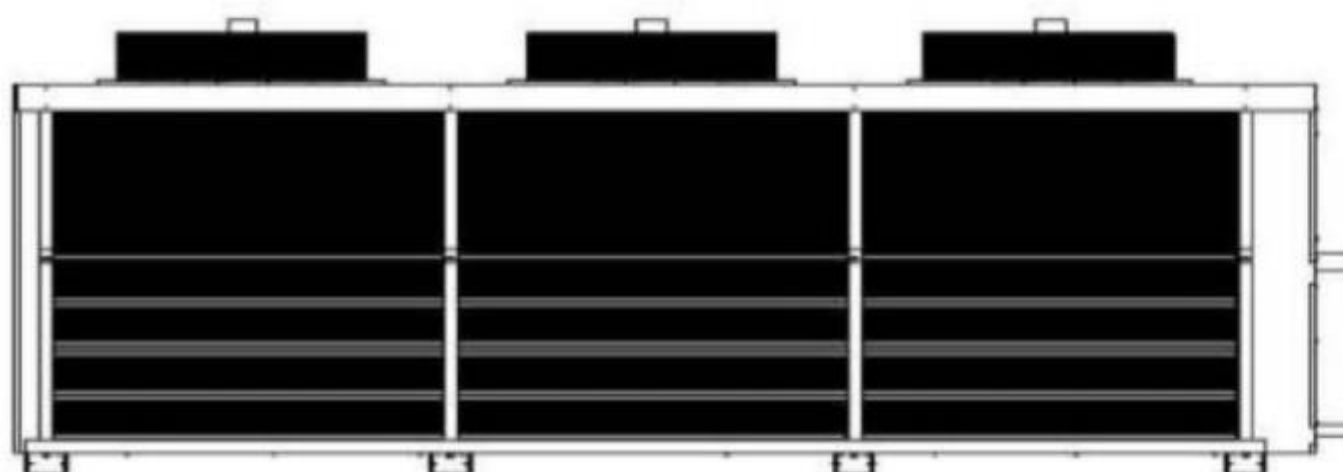
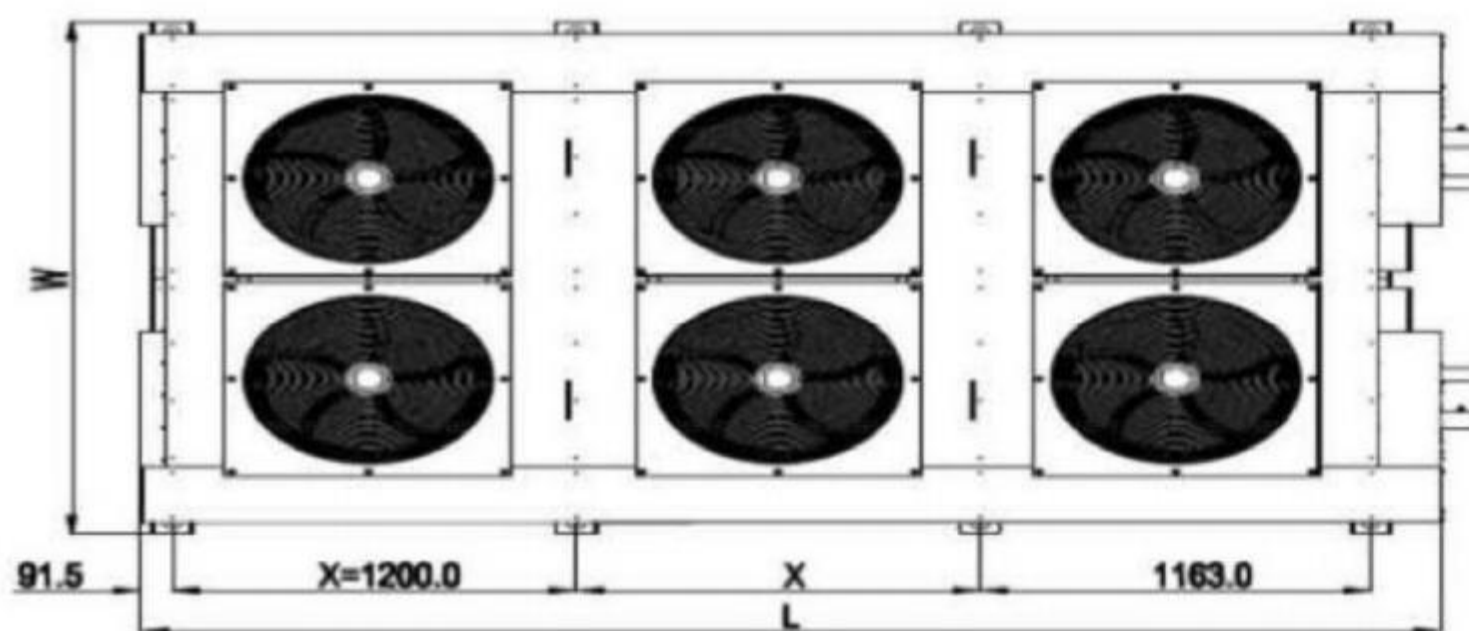


Dry Cooler D4 Series

Dry Cooler Fin Spacing 2.1mm

Type		D4-176-4x800	D4-191-4x800	D4-205-4x800	D4-267-6x800	D4-291-6x800	D4-315-6x800	D4-361-8x800	D4-394-8x800	D4-414-8x800
Capacity	Water	205.8	249.8	291.9	306.6	340.5	389.1	406.0	431.3	490.6
	20% Glycol	201.9	238.8	286.1	300.8	329.7	381.5	398.5	420.5	482.9
Medium	Water Flow	35.8	43.4	50.7	53.3	59.2	67.6	70.6	75.0	85.3
	Pressure Drop	92	21	98	88	46	99	79	82	99
Air Flow		78781	128728	123170	118174	171631	160328	153274	214533	200405
Fan Motor 3Phase/400V/50Hz	W	7200	10800	10800	10800	14400	14400	14400	18000	18000
	A	15.2	22.8	22.8	22.8	22.80	30.40	30.40	38.00	38.00
Fan		No.x φ	2x2x800	2x3x800	2x3x800	2x3x800	2x4x800	2x4x800	2x5x800	2x5x800
Sound Pressure Level		dB(A) 10m	54.0	56.0	56.0	56.0	58.0	58.0	58.0	60.0
Dimension	L	mm	3800	5600	5600	5600	7400	7400	9200	9200
	W	mm	2108	2108	2108	2108	2108	2108	2108	2108
	H	mm	1328	1328	1328	1328	1328	1328	1328	1328
Inlet φ		mm	4"	DN125	DN125	DN125	DN125	2x4"	2x4"	2xDN125
Outlet φ		mm	4"	DN125	DN125	DN125	DN125	2x4"	2x4"	2xDN125
Product Weight (empty)		kg	1127	1373	1462	1704	1785	1816	2150	2380

Schematic



Dry Cooler Fin Spacing 2.1mm

Type			D4-428-10x800	D4-488-10x800	D4-510-10x800	D4-520-12x800	D4-591-12x800	D4-617-12x800	D4-724-14x800	D4-792-16x800		
Capacity	Water	35°C Outdoor temp.	inlet 45°C outlet 40°C	kW	427.6	488.1	509.9	519.9	590.7	616.7	723.6	791.6
	20% Glycol											
Medium	Water Flow		m ³ /h	74.3	84.9	88.7	90.4	102.7	107.2	125.8	137.6	
	Pressure Drop		kPa	28	60	48	43	99	78	99	99	
Air Flow			m ³ /h	216938	202183	193538	260320	242613	232238	270940	323168	
Fan Motor 3Phase/400V/50Hz			W	18000	18000	18000	21600	21600	21600	25200	28800	
			A	38.00	38.00	38.00	45.60	45.60	45.60	53.20	60.80	
Fan			No.x φ	2x5x800	2x5x800	2x5x800	2x6x800	2x6x800	2x6x800	2x7x800	2x8x800	
Sound Pressure Level			dB(A) 10m	60.0	60.0	60.0	62.0	62.0	62.0	64.0	66.0	
Dimension			L mm	6270	6270	6270	7470	7470	7470	8670	9870	
			W mm	2520	2520	2520	2520	2520	2520	2520	2520	2520
			H mm	2000	2000	2000	2000	2000	2000	2000	2000	2000
Inlet φ			mm	4"	2x4"	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	
Outlet φ			mm	4"	2x4"	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	2xDN125	
Product Weight (empty)			kg	1127	2159	2250	2327	2480	2568	2741	2947	

Schematic

