



VD - SERIES DRY COOLERS



**PRZEDSIĘBIORSTWO PRODUKCJI URZĄDZEŃ
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Application:

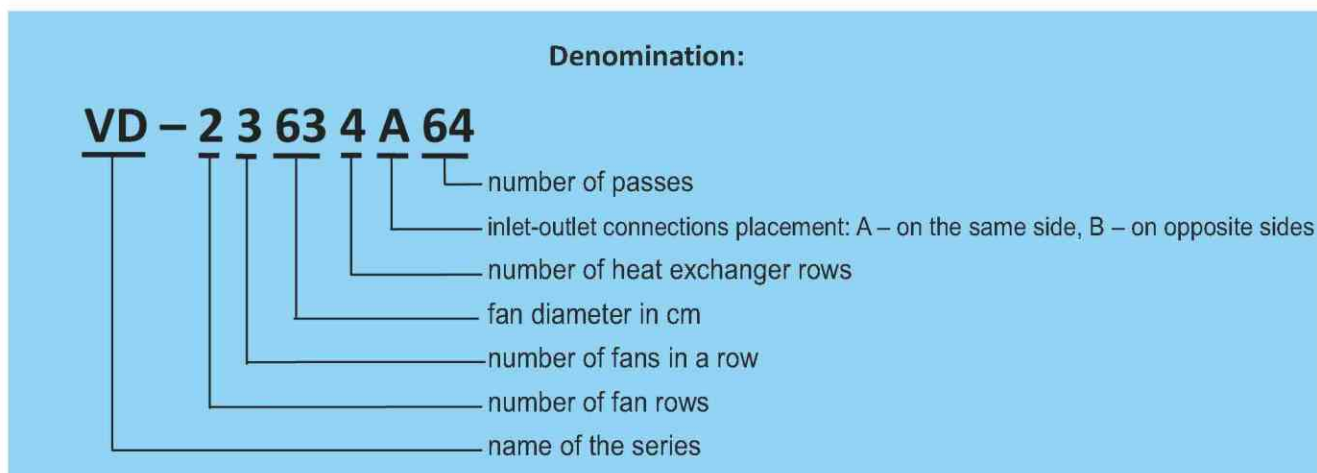
PPUCh Tarczyn presents a new series of VD type dry coolers, based on G05 geometry. This newly developed product, the fruit of many years of our designers' experience, is able to fully satisfy the needs for this kind of cooling units. The combination of factors like tube geometry, appropriate fans, and modules enabling to achieve the maximum capacities for a given size range, places our units at the leading position among this type of products.

VD-series dry coolers with capacities between 125.7kW and 634.0kW are dedicated to be used in various systems:

- as auxiliary devices in AC systems (optimization of operating costs)
- as coolers for water and diesel engines oil in high capacity power generators, injection moulding machines, and other industrial devices
- as a completion of glycol cooling systems (cold recuperation)

Design:

The dry cooler coils are built with 1/2" copper tubes mechanically expanded inside aluminium fins which are equipped with flanges covering the whole fin spacing distance, thus ensuring perfect thermal contact. All coils are tested at 30 bar pressure. Galvanized steel casing painted with RAL 9016.



VD-series dry coolers with ø630 fans

Capacity determined in accordance with PN-EN 1048:2001

Ambient temperature: 25°C

Cooling agent: water

Inlet temperature: 40°C

Outlet temperature: 35°C

Type	Capacity [kW]	Air flow [m ³ /h]	Noise [dB(A)]	Inlet Outlet [inch]	Pressure drop [kPa]	Cooling medium flow [m ³ /h]	Surface [m ²]	Internal volume [dcm ³]	No. of fans [pcs]	Weight [kg]
VD-21634A48	125,7	33 200	65	1 ½"	36,9	21,8	307	70	2	380
VD-22634A96	256,4	66 400	66	2"	34,3	44,5	614	128	4	700
VD-23634A128	384,7	99 600	70	2 ½"	44,4	66,8	921	174	6	1010
VD-24634A192	503,0	132 800	71	3"	31,2	87,3	1229	233	8	1330
VD-25634A192	634,0	166 000	72	4"	56,4	110,1	1536	281	10	1640

Fans - ø630 suction – 1,9 KW/400V

Noise level provided as sound pressure from the distance of 10m

Capacity calculation for 30% ethylene glycol

Ambient temperature: 25°C

Cooling agent: 30% ethylene glycol

Inlet temperature: 40°C

Outlet temperature: 35°C

Type	Capacity [kW]	Air flow [m ³ /h]	Noise [dB(A)]	Inlet Outlet [inch]	Pressure drop [kPa]	Cooling medium flow [m ³ /h]	Surface [m ²]	Internal volume [dcm ³]	No. of fans [pcs]	Weight [kg]
VD-21634A48	115,5	33 200	65	1 ½"	37,6	21,2	307	70	2	380
VD-22634A96	231,0	66 400	66	2"	38,4	42,4	614	128	4	700
VD-23634A128	349,2	99 600	70	2 ½"	45,9	64,1	921	174	6	1010
VD-24634A192	454,0	132 800	71	3"	35,3	83,4	1229	233	8	1330
VD-25634A192	580,0	166 000	72	4"	58,9	106,5	1536	281	10	1640

Capacity calculation for low temperature 30% ethylene glycol

All dry cooler models may be fitted with a different number of passes in order to customize the unit for the requirements of a particular cooling system. The table below presents examples of combinations with different units in low temperature glycol systems (e.g. fruit and vegetables storage).

Capacity (Q) for 30% ethylene glycol at 0°C outlet temperature.

Specification			Units	VD-21634				VD-22634		VD-23634		VD-24634		VD-25634	
				A24	A32	A48	A64	A48	A64	A64	A96	A96	B128	B128	A192
Air temperature outside	-5°C	Capacity Q	[KW]	24,6	29,2	34,9	37,6	47,1	58,7	64,4	90,6	96,9	118,8	128,6	164,5
		outlet glycol temp. tg ₂	[°C]	-2,5	-1,9	-1,2	-0,8	-2,4	-1,9	-2,6	-1,9	-2,4	-1,9	-2,3	-1,5
	-10°C	Capacity Q	[KW]	48,1	57,0	68,2	74,8	92,5	114,5	127,0	172,9	184,3	232,2	247,1	342,9
		outlet glycol temp. tg ₂	[°C]	-5,3	-3,7	-2,5	-1,7	-4,7	-3,7	-5,1	-3,7	-4,6	-3,7	-4,4	-3,0
	-15°C	Capacity Q	[KW]	73,2	83,2	102,6	111,6	138,1	167,1	189,6	252,5	260,8	339,7	353,8	480,8
		outlet glycol temp. tg ₂	[°C]	-7,7	-5,5	-3,6	-2,5	-7,1	-5,5	-7,7	-5,4	-6,5	-5,4	-6,4	-4,4
Glycol flow at 75kPa pressure drop			[m ³ /h]	9,0	14,3	26,6	41,7	18,3	28,7	23,3	44,9	37,4	58,7	52,2	101,4
No. of fans			[szt.]	2				4		6		8		10	
Air capacity			[m ³ /h]	33 200				66 400		99 600		132 800		166 000	
Surface			[m ²]	307				614		921		1229		1536	
Internal volume			[dcm ³]	60	65	70	78	113	118	166	174	222	233	281	298
Connections			[cal]	1"	1 1/2"	2"	2 1/2"	1 1/2"	2"	2"	2 1/2"	2 1/2"	3"	3"	4"
Weight			[kg]	380	390	400	410	680	690	980	990	1300	1310	1610	1640
Noise 10m away			[dB]	65				66		70		71		72	
Dimensions	Length		[mm]	1270	1270	1270	1270	2370	2370	3480	3480	4600	4600	5720	5740
	Width		[mm]	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980	1980
	Height		[mm]	1780	1780	1780	1780	1780	1780	1780	1780	1780	1780	1780	1780

VD-series dry coolers
 V-type arrangement – two rows of $\phi 630$ fans

