

FXVT

Closed circuit cooling towers



Key benefits

- Star in energy efficiency
- Low maintenance and easy inspection
- Optimal performance guaranteed



FXVT characteristics

Combined flow, axial fan, induced draft

Capacity range

up to 2320 kW

Maximum entering fluid temperature

82°C

Typical applications

- Medium to large HVAC and industrial applications such as electric arc furnaces and pharmaceutical plants.



Star in energy-efficiency

- **Evaporative cooling** PLUS unique combined heat transfer system for minimized system-wide energy consumption.
- **Axial fan** – half the consumption of rivals and huge single cell capacity: saving you more!
- **BACross II fill** factory-configured for unrivalled water/air contact and minimal air pressure drop. Guarantees **optimal cooling tower efficiency** with cooling system energy well under control.
- **High efficiency fan motors.**

Low maintenance and easy inspection

- Inspect and maintain towers with **unrivalled comfort and safely: while standing** inside.
- The FXVT has a **spacious plenum** (internal area) and **easy inspection/maintenance access**
- **Fans** are easily accessible from the in- and outside
- Inspect internal fill and coil easily via **removable drift eliminator modules.**
- The **BACross II fill** is telescopically-supported for easy sheet by sheet inspection/cleaning and **no dismantling.**
- Self-cleaning cold water basin and fill above **sloped basin** to flush out dirt and debris.

Optimal performance guaranteed

- The **thermal performance** of FXVT is tested and certified by **CTI and Eurovent.**
- Unique and patented heat transfer system: **featuring combined flow** via heat exchange coil and fill pack, for fine temperature applications and thermal challenges.
- **Huge industry-best single cell capacity!**
- **BACross II fill** - patented sheet and **maximum air/water contact** for optimal heat transfer performance.
- Encased in **corrosion-resistant fibreglass** polyester for long service life.

Ultra silent design

- FXVT units include **low noise axial fans** for minimal surrounding noise. To reduce noise even further, choose for **Whisper Quiet fans.**
- Factory designed, tested and rated **sound attenuation** is available on air inlet to cut operation noise even further.
- **BACross II fill** guides smoothly the water all the way into the basin **without water splash noise.**

Cheap to install

- FXVT cooling towers are factory-built and shipped in sections for larger models to reduce the overall size and weight, allowing **easy on-site section assembly** with smaller crane.

Unmatched hygiene control



- Easy-clean and easy-inspect FXVT towers **reduce hygiene risks** from bacteria or biofilm inside.
- **Combined inlet shields** block sunlight to prevent biological growth in the tower, filter the air and stop water splashing outside.
- The **drift eliminators** to prevent droplets escaping into the air are tested and certified by Eurovent.

Interested in the FXVT cooling tower for cooling your process fluid? Contact your [local BAC representative](#).

Downloads

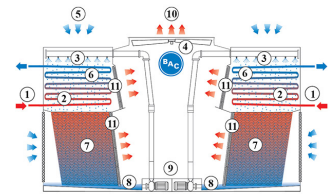
- [FXVT closed circuit cooling towers](#)
- [Operating and Maintenance FXVT](#)
- [Rigging and Installation FXVT](#)
- [BAC - Eurovent Certification](#)
- [Spare Parts for FXVT](#)
- [Retrofit Opportunities for FXVT](#)
- [Combined Flow Technology](#)

Principle of operation

Closed circuit cooling towers

Principle of operation

The FXVT combines the function of a cooling tower and a heat exchanger into one unit. The warm process **fluid (1)** circulates on both sides of the tower through a **heat exchanger coil (2)**, which is wetted by a **spray system (3)**. In parallel with the water spray flow, an **axial fan (4)** draws **air (5)** over the coil. The evaporation process cools the **fluid (6)** inside the coils. Because the coldest spray water and air are in the top of the tower, the process fluid travels from the bottom to the top of the coils. The spray water falls onto a **fill pack (7)** where it is cooled before falling into the **water basin (8)**. Spray **pumps (9)** recirculate the cooled water to the top of the tower. The warm saturated **air (10)** leaves the tower through the **drift eliminators (11)** which remove water droplets from the air.



Interested in the FXVT closed circuit cooling tower? Contact your local [BAC representative](#) for more information.

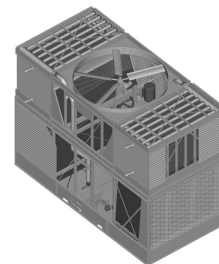
Construction details

Closed circuit cooling towers

Construction details

1. Material options

- Heavy-gauge hot-dip galvanized steel is used for external unit steel panels and structural elements featuring [Baltiplus Corrosion Protection](#). For casing panels we use UV resistant **fiberglass** reinforced polyester.
- The unique [Baltibond hybrid coating](#) is an optional extra. A hybrid polymer coating for longer service life, applied pre-assembly to all hot-dip galvanized steel components of the unit.
- [Optional stainless steel](#) panels and structural elements of type 304L or 316L for extreme applications.
- Or the economical alternative: a **water-contact stainless steel cold water basin**. Its key components and the basin itself are stainless steel. The rest is protected with the Baltibond hybrid coating.

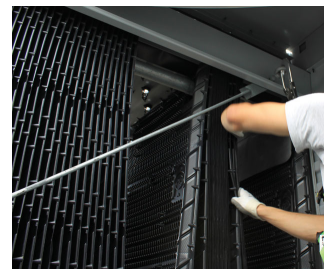


2. Heat transfer media

Unique and patented heat transfer system: featuring [combined flow](#) via heat exchange coil and fill pack.

Coil

- Our heat transfer media is a **cooling coil**. The coil is constructed of continuous length of prime surface steel, hot-dip galvanized after fabrication. Sloping tubes for free drainage of fluid. Designed for maximum 10 bar operating pressure according to PED.
- All hot dip galvanized and stainless steel coils are delivered with BAC's **Internal Coil Corrosion Protection**, to ensure an optimal internal corrosion protection and guaranteed quality.
- **Optional stainless steel coils** are in type 304L or 316L.
- Maximum temperature 82°C.



Fill

- Patented [BACross II fill](#) with integrated **drift eliminators**. Its thermal performance is proven during comprehensive [lab thermal performance tests](#). and it offers you unrivalled system efficiency. The fill pack includes individual **sheets and a telescopic fill support**. Sheets are easy to inspect and clean inside the tower without dismantling, eliminating the need for frequent fill replacement.
- In self-extinguishing **plastic**, which will not rot, decay or decompose.

3. Air movement system

- **FXVT fan system** features two corrosion resistant sheaves, belt and motor. Together with the heavy duty fan shaft bearings and the BAC **Impervix** motor, this guarantees optimal and year-round operational efficiency.
- **Low kW and noise axial fan(s)** in corrosion resistant aluminum, encased in fan cylinder with removable fan guard. To reduce noise even further, choose for a [Whisper Quiet fan](#) with minimal impact on thermal performance.
- Our **drift eliminators** in the coil section come in UV-resistant plastic, which will not rot, decay or decompose and their performance is tested and **certified by Eurovent**. They are assembled in **easily handled and removable sections**, for optimal coil access.
- Easy removable UV-resistant plastic **combined inlet shields** at air inlet. Sunlight block to prevent biological growth in tower, air filter and water splash-out stop.



4. Water distribution system

These consist of:

- **Spray branches** with wide non-clog, plastic, 360° distribution nozzles secured in grommets. Overlapping spray pattern for complete coil wetting. A **sloped cold water basin** with:
 - large hinged and inward swinging **access** door
 - anti-vortexing **strainers** and **make up** both easily accessible from inside the unit.
- Close coupled, bronze fitted centrifugal **spray pump** with totally enclosed fan cooled (TEFC) motor. Bleed line with metering valve installed from pump discharge to overflow.



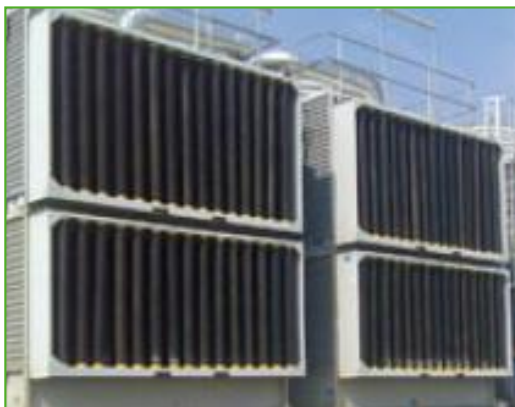
Need more information? Contact your local [BAC representative](#).

Options and accessories

Closed circuit cooling towers

Options and accessories

Below is a listing of the main FXVT options and accessories. If your required option or accessory is not listed, look no further than your [local BAC representative](#).



Sound attenuation

Reducing noise at air **intake and discharge points** brings us closer to silent cooling equipment.



Whisper Quiet fan

Reduce fan noise even more with **very low sound factory-tested fans**.



Gear drive system with close coupled motor

A close-coupled gear box for **more efficiency** and **less maintenance**.



Gear drive system with externally mounted motor

A gear box with an external motor outside the air stream helps **improve efficiency** and **ease of maintenance**.



Positive closure dampers

Use positive closure dampers (PCD) to **minimize the heatloss due to convection** by preventing air flow through equipment that is shut down.



Internal service platform

An internal platform helping you **access the unit top inside** and safely inspect your cooling towers.



External service platform

An external platform helping you **access the external unit top** and safely inspect your cooling towers.



Basin heater package

Thanks to our factory-installed heaters, the water stays at 4°C and **never freezes**, even during equipments downtime and however cold it gets outside.



Remote sump connection

The best way to **prevent a sump freezing** is to use the auxiliary remote variety within a heated area. Shutting off the circulating pump allows all the water in the water distribution, as well as that in suspension and the sump to drain freely to the auxiliary sump.



Extended lubrication lines

Extended lubrication lines with easily accessible grease fittings can be used **to lubricate** fan shaft bearings.



Electric water level control package

For **perfectly precise water level control**, replace the standard mechanical valve with our electrical water level controller.



Mechanical equipment removal system

This **helps** you **remove or install** fan motors or gearboxes.



Vibration cut out switch

When excessive vibration occurs, this switch shuts down the fan, ensuring your cooling equipment **operates safely**.



Water treatment equipment

Devices to control water treatment are needed to ensure proper **cooling tower water care**. Not only does this help protect the components and fill pack, controlling corrosion, scaling and fouling, it also avoids the proliferation of harmful bacteria, including **legionella**, in the recirculating water.



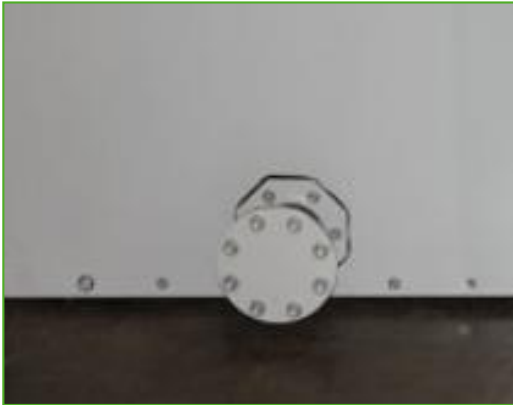
Sump sweeper piping

Sump sweeper piping **prevents sediment collecting in the cold water basin** of the unit. A complete piping system, including nozzles, are installed in the basin of the tower **for connection to side stream filtration** equipment.



Filter

Separators and media filters efficiently **remove suspended solids** in the recirculating water, reducing system cleaning costs and optimizing water treatment results. Filtration helps you keep the recirculating water clean.



Flanges

Flanges facilitate **pipng connections** on-site.



Special needs?

Closed circuit cooling towers

Special needs?

Our ongoing [R&D](#) investment helps BAC offer you a complete set of solutions **for FXVT closed circuit cooling towers that meet your needs**. Plus, we also cater for extra requirements such as:

Sound control

FXVT uses a low noise axial fan.

Helping keep it near noiseless:

- [Sound attenuators](#)
- [Whisper Quiet fan](#)

Water savings

You need water for evaporative cooling. At BAC, however, we offer acclaimed and advanced water saving technologies. Helping in this aim are:

- [Electric water level control package](#)
- [Water treatment equipment](#)
- [Sump sweeper piping](#)
- [Filters](#)

BAC boasts a **complete water saving product range** for unrivalled water saving AND exceptional thermal efficiency, thanks to water saving technology. Hybrid wet/dry cooling towers are: [HXI](#), [HFL](#), [TrilliumSeries coolers](#).



Energy saving

FXVT uses evaporative cooling technology for lower operating temperatures than other cooling methods. With the following options, reduce energy costs still further:

- Thermostat

Enhanced hygiene and water care

Water circulates in evaporative cooling towers and it is important to avoid excessive accumulation of dissolved solids. The following options help keep your cooling tower clean:

- [Remote sump connection](#)
- [Water treatment equipment](#)
- [Sump sweeper piping](#)
- [Filters](#)

To control biological growth and scale formation, the water quality of the circulated water should be checked regularly. [Water quality guidelines](#) can be found in the [Knowledge center](#) of the website.



Year-round reliable operation

Inspect and maintain your cooling tower and protect it against extreme weather for year-round reliability. The options below help keep your cooling tower running smoothly and reliably and facilitate maintenance.

- [Remote sump connection](#)
- [Water treatment equipment](#)
- [Sump sweeper piping](#)
- [Filters](#)
- [Internal service platform](#)
- [External service platform](#)
- [Vibration cut out switch](#)
- [Electric water level control package](#)
- [Extended lubrication lines](#)
- [Baltibond hybrid coating](#)

Do you too want to benefit from the above solutions? Contact your [local BAC representative](#) for more information.



FXVT 288-3 288-4 288-Q

Closed circuit cooling towers

Engineering data

REMARK: Do not use for construction. Refer to factory certified dimensions & weights. This page includes data current at the time of publication, which should be reconfirmed at the time of purchase. In the interest of product improvement, specifications, weights and dimensions are subject to change without notice.

General notes

1. Operating weight is for the tower with the water level in the cold water basin at the overflow.
2. The actual size and number of inlet and outlet connections may vary with the design flow rate. Consult unit print for dimensions.
3. Inlet and outlet connections are beveled for welding.
4. Standard make up, drain and overflow connections are located at the bottom of the unit.
5. Models shipped with an optional gear drive may have heights up to 130 mm greater than shown. Models with fan motor up to 22 kW are belt driven only; models with motor between 22 kW and 45 kW have standard belt drive but gear drive as an option; models with 55 kW motor have gear drive only. Motor size for specific model is indicated by a letter "x" at the end of the model name. Fan type is indicated by an additional letter "y" at the end of the model name. "L" refers to the standard Low Noise Fan; "W" refers to the Whisper Quiet fan.
6. FXVT models will be shipped in four sections: 1 x lower, 1 x fan and 2 x coil sections. Weight is shown for one coil section.

[FXVT cooling tower performance at standard conditions - 30% EG](#)

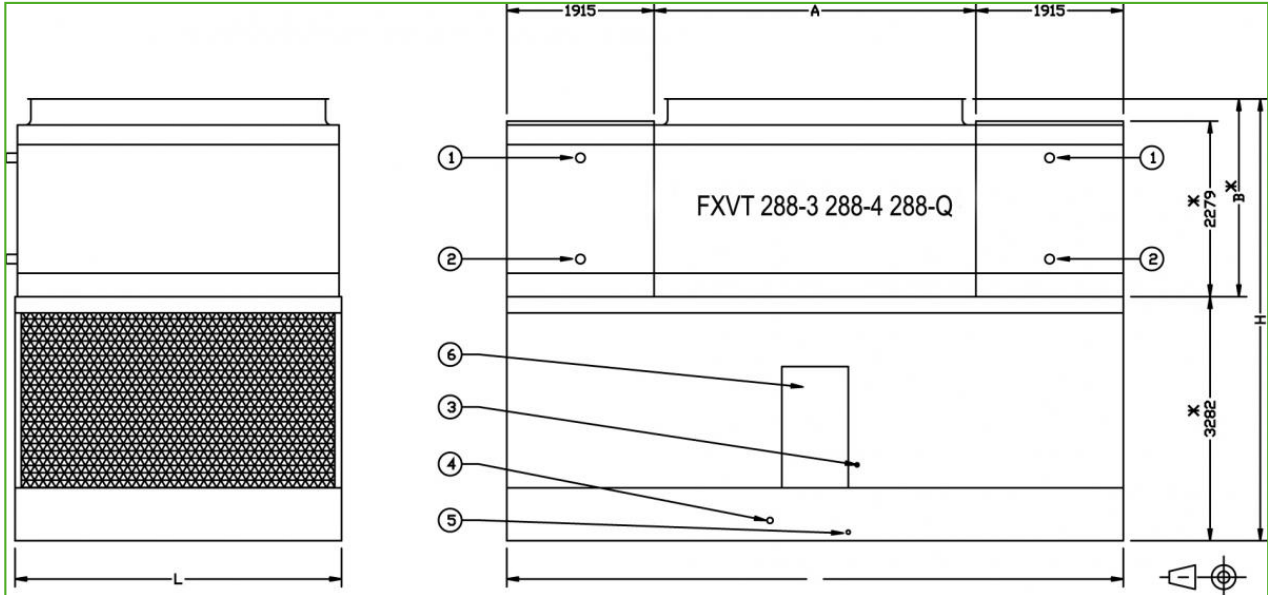
[FXVT cooling tower performance at standard conditions - 30% PG](#)

[FXVT cooling tower performance at standard conditions - water](#)

[FXVT cooling tower - pressure drop](#)

Last update: 01/06/2023

FXVT 288-3 288-4 288-Q



1. Fluid out; 2. Fluid in; 3. Make up ND40; 4. Overflow ND80; 5. Drain ND50; 6. Access door.



Model	Weights (kg)			Dimensions (mm)			Air Flow (m ³ /s)	Fan Motor (kW)	Water Flow (l/s)	Pump Motor (kW)	Coil Volume (L)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H					
FXVT 288-3M L	20140	12675	3650	3632	7328	5665	68.4	(1x) 15.0	100.0	(2x) 5.5	(2x) 1082
FXVT 288-3N L	20155	12690	3650	3632	7328	5665	73.6	(1x) 18.5	100.0	(2x) 5.5	(2x) 1082
FXVT 288-3O L	20175	12710	3650	3632	7328	5665	78.2	(1x) 22.0	100.0	(2x) 5.5	(2x) 1082
FXVT 288-3P L	20250	12785	3650	3632	7328	5665	86.0	(1x) 30.0	100.0	(2x) 5.5	(2x) 1082
FXVT 288-3Q L	20255	12790	3650	3632	7328	5665	92.5	(1x) 37.0	100.0	(2x) 5.5	(2x) 1082
FXVT 288-3R L	20355	12890	3650	3632	7328	5665	98.3	(1x) 45.0	100.0	(2x) 5.5	(2x) 1082
FXVT 288-4M L	21815	13930	4280	3632	7328	5665	65.1	(1x) 15.0	100.0	(2x) 5.5	(2x) 1294
FXVT 288-4N L	21830	13940	4280	3632	7328	5665	70.1	(1x) 18.5	100.0	(2x) 5.5	(2x) 1294
FXVT 288-4O L	21850	13965	4280	3632	7328	5665	74.4	(1x) 22.0	100.0	(2x) 5.5	(2x) 1294
FXVT 288-4P L	21925	14045	4280	3632	7328	5665	81.8	(1x) 30.0	100.0	(2x) 5.5	(2x) 1294
FXVT 288-4Q L	21930	14050	4280	3632	7328	5665	88.1	(1x) 37.0	100.0	(2x) 5.5	(2x) 1294
FXVT 288-4R L	22030	14150	4280	3632	7328	5665	93.5	(1x) 45.0	100.0	(2x) 5.5	(2x) 1294
FXVT 288-Q ML	21815	13930	4280	3632	7328	5665	64.0	(1x) 15.0	100.0	(2x) 5.5	(2x) 1283
FXVT 288-QN L	21830	13940	4280	3632	7328	5665	68.8	(1x) 18.5	100.0	(2x) 5.5	(2x) 1283
FXVT 288-Q OL	21850	13965	4280	3632	7328	5665	73.1	(1x) 22.0	100.0	(2x) 5.5	(2x) 1283
FXVT 288-QP L	21925	14035	4280	3632	7328	5665	80.4	(1x) 30.0	100.0	(2x) 5.5	(2x) 1283
FXVT 288-Q QL	21930	14040	4280	3632	7328	5665	86.5	(1x) 37.0	100.0	(2x) 5.5	(2x) 1283
FXVT 288-QR L	22030	14150	4280	3632	7328	5665	91.9	(1x) 45.0	100.0	(2x) 5.5	(2x) 1283





FXVT 364-3 364-4 364-Q

Closed circuit cooling towers

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General notes

1. Operating weight is for the tower with the water level in the cold water basin at the overflow.
2. The actual size and number of inlet and outlet connections may vary with the design flow rate. Consult unit print for dimensions.
3. Inlet and outlet connections are beveled for welding.
4. Standard make up, drain and overflow connections are located at the bottom of the unit.
5. Models shipped with an optional gear drive may have heights up to 130 mm greater than shown. Models with fan motor up to 22 kW are belt driven only; models with motor between 22 kW and 45 kW have standard belt drive but gear drive as an option; models with 55 kW motor have gear drive only. Motor size for specific model is indicated by a letter "x" at the end of the model name. Fan type is indicated by an additional letter "y" at the end of the model name. "L" refers to the standard Low Noise Fan; "W" refers to the Whisper Quiet fan.
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[FXVT cooling tower performance at standard conditions - 30% EG](#)

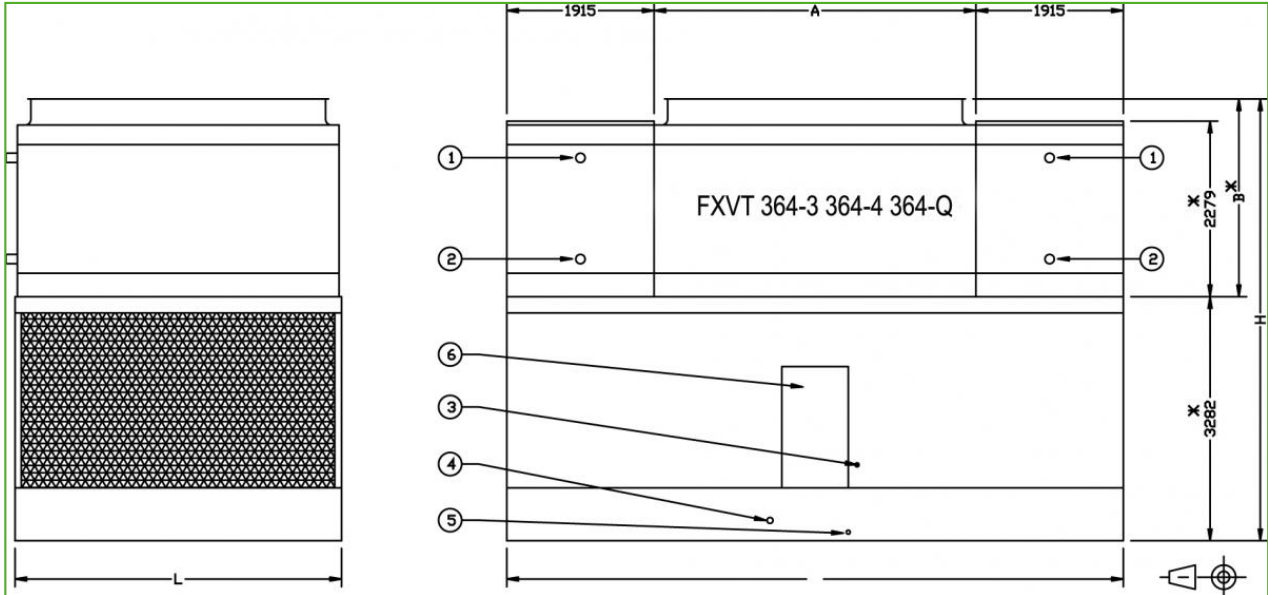
[FXVT cooling tower performance at standard conditions - 30% PG](#)

[FXVT cooling tower performance at standard conditions - water](#)

[FXVT cooling tower - pressure drop](#)

Last update: 01/06/2023

FXVT 364-3 364-4 364-Q



1. Fluid out; 2. Fluid in; 3. Make up ND40; 4. OVerflow ND80; 5. Drain ND50; 6. Access door.



Model	Weights (kg)			Dimensions (mm)			Air Flow (m ³ /s)	Fan Motor (kW)	Water Flow (l/s)	Pump Motor (kW)	Coil Volume (L)
	Oper. Weight (kg)	Ship. Weight(kg)	Heaviest Section (kg)	L	W	H					
FXVT 364-3N L	23585	14470	4260	4245	8014	5685	86.8	(1x) 18.5	100.0	(2x) 5.5	(2x) 1268
FXVT 364-3O L	23605	14490	4260	4245	8014	5685	92.2	(1x) 22.0	100.0	(2x) 5.5	(2x) 1268
FXVT 364-3P L	23680	14560	4260	4245	8014	5685	101.4	(1x) 30.0	100.0	(2x) 5.5	(2x) 1268
FXVT 364-3Q L	23685	14570	4260	4245	8014	5685	109.1	(1x) 37.0	100.0	(2x) 5.5	(2x) 1268
FXVT 364-3R L	23785	14670	4260	4245	8014	5685	115.9	(1x) 45.0	100.0	(2x) 5.5	(2x) 1268
FXVT 364-3S L	23830	14715	4260	4245	8014	5685	124.7	(1x) 55.0	100.0	(2x) 5.5	(2x) 1268
FXVT 364-4N L	25565	15955	5005	4245	8014	5685	83.0	(1x) 18.5	100.0	(2x) 5.5	(2x) 1514
FXVT 364-4O L	25585	15980	5005	4245	8014	5685	88.1	(1x) 22.0	100.0	(2x) 5.5	(2x) 1514
FXVT 364-4P L	25655	16050	5005	4245	8014	5685	96.9	(1x) 30.0	100.0	(2x) 5.5	(2x) 1514
FXVT 364-4Q L	25665	16055	5005	4245	8014	5685	104.3	(1x) 37.0	100.0	(2x) 5.5	(2x) 1514
FXVT 364-4R L	25760	16155	5005	4245	8014	5685	110.7	(1x) 45.0	100.0	(2x) 5.5	(2x) 1514
FXVT 364-4S L	25805	16200	5005	4245	8014	5685	119.2	(1x) 55.0	100.0	(2x) 5.5	(2x) 1514
FXVT 364-QN L	25565	15955	5005	4245	8014	5685	80.5	(1x) 18.5	100.0	(2x) 5.5	(2x) 1540
FXVT 364-Q OL	25585	15980	5005	4245	8014	5685	85.5	(1x) 22.0	100.0	(2x) 5.5	(2x) 1540
FXVT 364-QP L	25655	16050	5005	4245	8014	5685	94.1	(1x) 30.0	100.0	(2x) 5.5	(2x) 1540
FXVT 364-Q QL	25665	16055	5005	4245	8014	5685	101.2	(1x) 37.0	100.0	(2x) 5.5	(2x) 1540
FXVT 364-QR L	25760	16155	5005	4245	8014	5685	107.5	(1x) 45.0	100.0	(2x) 5.5	(2x) 1540
FXVT 364-QS L	25805	16200	5005	4245	8014	5685	115.7	(1x) 55.0	100.0	(2x) 5.5	(2x) 1540





Sound attenuation

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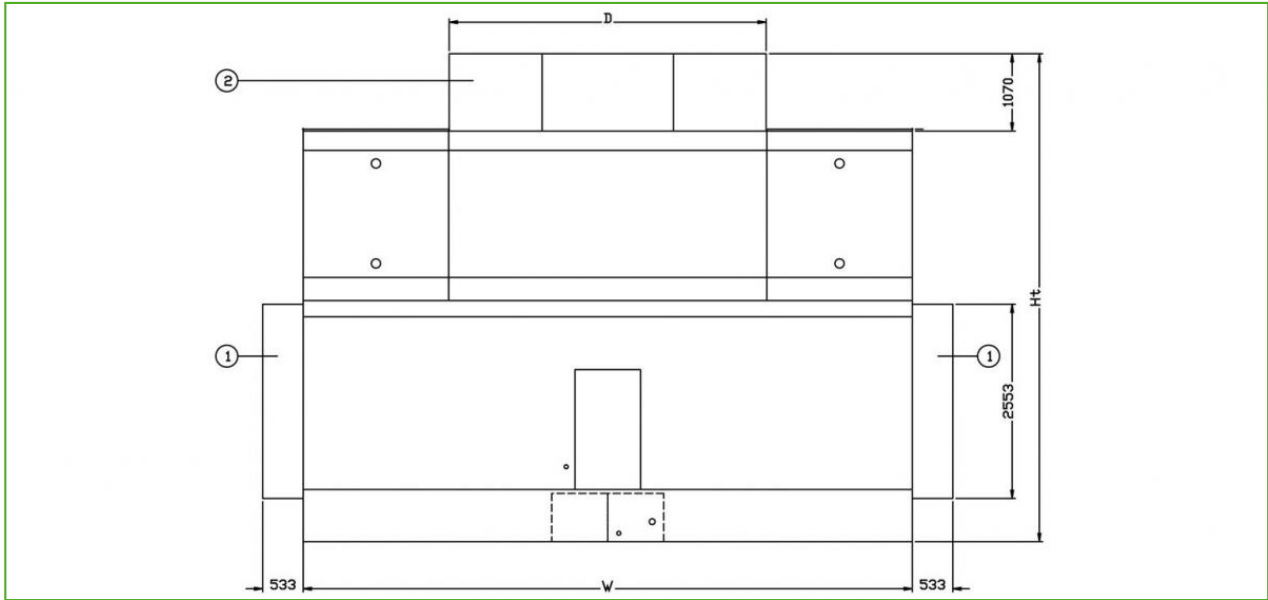
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[FXVT cooling tower performance at standard conditions - water](#)

[FXVT cooling tower - pressure drop](#)

Last update: 01/06/2023

Sound attenuation



1. Inlet attenuator; 2. Discharge attenuator.



Model	Dimensions (mm)		Weights (kg)	
	D	Ht	Intake	Discharge
FXVT 288-3ML	3500	5665	685	477
FXVT 288-3NL	3500	5665	685	477
FXVT 288-3OL	3500	5665	685	477
FXVT 288-3PL	3500	5665	685	477
FXVT 288-3QL	3500	5665	685	477
FXVT 288-3RL	3500	5665	685	477
FXVT 288-4ML	3500	5665	685	477
FXVT 288-4NL	3500	5665	685	477
FXVT 288-4OL	3500	5665	685	477
FXVT 288-4PL	3500	5665	685	477
FXVT 288-4QL	3500	5665	685	477
FXVT 288-4RL	3500	5665	685	477
FXVT 288-QML	3500	5665	685	477
FXVT 288-QNL	3500	5665	685	477
FXVT 288-QOL	3500	5665	685	477
FXVT 288-QPL	3500	5665	685	477
FXVT 288-QQL	3500	5665	685	477
FXVT 288-QRL	3500	5665	685	477
FXVT 364-3NL	4185	5685	808	563
FXVT 364-3OL	4185	5685	808	563
FXVT 364-3PL	4185	5685	808	563
FXVT 364-3QL	4185	5685	808	563
FXVT 364-3RL	4185	5685	808	563
FXVT 364-3SL	4185	5685	808	563
FXVT 364-4NL	4185	5685	808	563
FXVT 364-4OL	4185	5685	808	563
FXVT 364-4PL	4185	5685	808	563
FXVT 364-4QL	4185	5685	808	563
FXVT 364-4RL	4185	5685	808	563
FXVT 364-4SL	4185	5685	808	563
FXVT 364-QNL	4185	5685	808	563
FXVT 364-QOL	4185	5685	808	563
FXVT 364-QPL	4185	5685	808	563
FXVT 364-QQL	4185	5685	808	563
FXVT 364-QRL	4185	5685	808	563
FXVT 364-QSL	4185	5685	808	563