

THE CHAMPIONSHIP SERIES PREFABRICATED VACUUM CENTRES



Vacuum Generating, Waste Collection and Disposal Components – The Vacuum Centre

Commonly referred to as the “Vac Centre”, the vacuum generating station includes vacuum pumps to create a continuous vacuum pressure within the piping network, and storage tanks that collect and discharge the waste, typically into the facilities sewer main. In the case of sanitary waste, the Vac Centre waste storage tanks are directly connected to sanitary sewer waste lines. Vacuum systems which provide drainage for greasy waste from food storage, display, or food preparation utility sinks are designed to allow for drainage from Vac Centre waste collection tanks into grease interceptors, while vacuum systems processing condensate and grey water typically drain to a sanitary sewer, but can be routed for reuse in toilet flushing etc.

The vacuum waste piping network is directly connected to the Vac Centre waste storage tanks. Waste travels under vacuum pressure from the fixture, through the piping network and into the Vac Centre waste storage tanks, where it is temporarily held before discharge to sanitary waste lines or treatment equipment. Operation of the vacuum pumps and waste collection tanks is fully automated by controls provided with the Vac Centre. The size of the vacuum pumps and waste collection tanks are determined by the total and potential future waste loads. In all cases, the Vac Centre waste collection tanks and vacuum pumps are always selected and designed to provide redundant capacity.

The Vac Centre controls automate the operation of the vacuum pumps which run only on demand as required to restore vacuum pressure to the waste collection tanks and piping network. Optional features allow remote visibility of the system operating status as well as visibility and control of individual valve operation.

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Our Championship Vacuum Plumbing Products Series

Avac is pleased to offer the Championship Vacuum Plumbing Series for smaller applications. The Championship Series vacuum centres are tailored for projects with limited drainage requirements. They are designed to provide a fast and practical drainage solution for most retrofit, remodel and new construction environments.

The Championship Series eliminates the requirement for costly saw cutting and trenching for renovation projects requiring drainage where no immediate access to conventional underground sanitary waste lines exist, and allows projects to be completed in a fraction of the time.

What is best about the Championship Series is that it provides a framework for system sizing and application. Our systems are competitively priced to provide a cost saving alternative to conventional plumbing fixtures and equipment. These systems can be installed practically anywhere to supply drainage - even at remote locations in an existing building. They are great for tenant applications, big box retailers and distribution centres.



Championship Series Products	Descriptions						
	Collection Tanks	Vacuum Pumps				Capacity*	
System and Series Numbers	Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
AVAC3100-121	1	115	Liquid Ring	1	1.2	18	18 LPM
AVAC3100-221	2	115	Recirculating Liquid Ring	2	1.2	30	50 LPM
AVAC3101-221	2	115	Recirculating Liquid Ring	2	1.8	47	50 LPM
AVAC3200-221	2	230	Recirculating Liquid Ring	2	2.4	65	100 LPM
AVAC3300-331	3	230	Recirculating Liquid Ring	3	2.4	85	200 LPM

*The maximum capacity of each system is based on maximum load point value or "LPV" (see chart above) and maximum continuous flow rate.

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Championship Vacuum Plumbing Products Series



Selecting the Right System

To select an appropriate Vacuum Center, you need to know the following:

- The type of equipment requiring drainage
- The collective load point value (LPV) of the fixtures and equipment requiring drainage
- Maximum anticipated continuous flow in litres per second, from all drainage combined.

If you need assistance, please contact Avac's Sales Engineering Department at 1300 123 451 or by email at info@avac.com.au. You can find us on the web at www.avac.com.au.

Load Point Value	Project Data (Fill in the Blank)		
Fixture Type	LPV per Fixture	Quantity of Fixture Type	Total Item Value (Multiply Quantity By LPV Value)
Vacuum Toilet; 1.8 LPF	7		
Urinals	3		
Hand Wash Basin	1		
Floor Drains	5		
Mop or Utility Sink	5		
Multiple Bay Prep Sinks	10		
Misting Systems	1		
Refrigerated Case Equipment	.5		
AC Units	4		
Total Project Load Points Value			

Sizing Your Champion

- Calculate the total fixture load requirement by adding the total point value for all equipment requiring vacuum drainage.
- Refer to the Maximum LPV in the table on page 2 to select the appropriate system.
- Calculate the continuous flow rate for all fixtures combined. To do this, consider the normal use of the fixtures and equipment. Add the anticipated litres per second flow from all fixtures that might require drainage at the same time.

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An Example of Sizing Your Champion:

A stocking and distribution warehouse with men's and women's bathrooms

Load Point Value	Project Data		
Fixture Type	LPV per Fixture	Quantity of Fixture Type	Total Item Value (Multiply Quantity By LPV Value)
Vacuum Toilet; 1.8 LPF	7	3	21
Urinals	3	1	3
Hand Wash Basin	1	2	2
Floor Drains	5	2	10
Mop or Utility Sink	5	1	5
Multiple Bay Prep Sinks	10	0	0
Misting Systems	1	0	0
Refrigerated Case Equipment	.5	0	0
AC Units	4	0	0
Total Project Load Points Value			41

In this example, the total Load Point Value is 41. This point value indicates AVAC3101-221, from the Championship Series Products table – provided that the anticipated continuous in-flow rate from all fixtures combined does not exceed 50 Litres per minute. If the anticipated continuous in-flow rate exceeds 50 Litres per minute, then select the system rated for 100 Litres per minute.

Championship Series Products	Descriptions						
	Collection Tanks	Vacuum Pumps				Capacity*	
System and Series Numbers	Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
AVAC3101-221	2	115	Recirculating Liquid Ring	2	1.8	47	50 LPM

If the anticipated continuous in-flow rate exceeds the product offering within the Championship Series, please contact Avac's Sales Engineering Department at 1300 123 451 or +61 2 8567 0345, or by email at info@avac.com.au. You can find this calculator and other product details on the web at www.avac.com.au.

*The maximum capacity of each system is based on maximum load point value or "LPV" (see chart above) and maximum continuous flow rate.



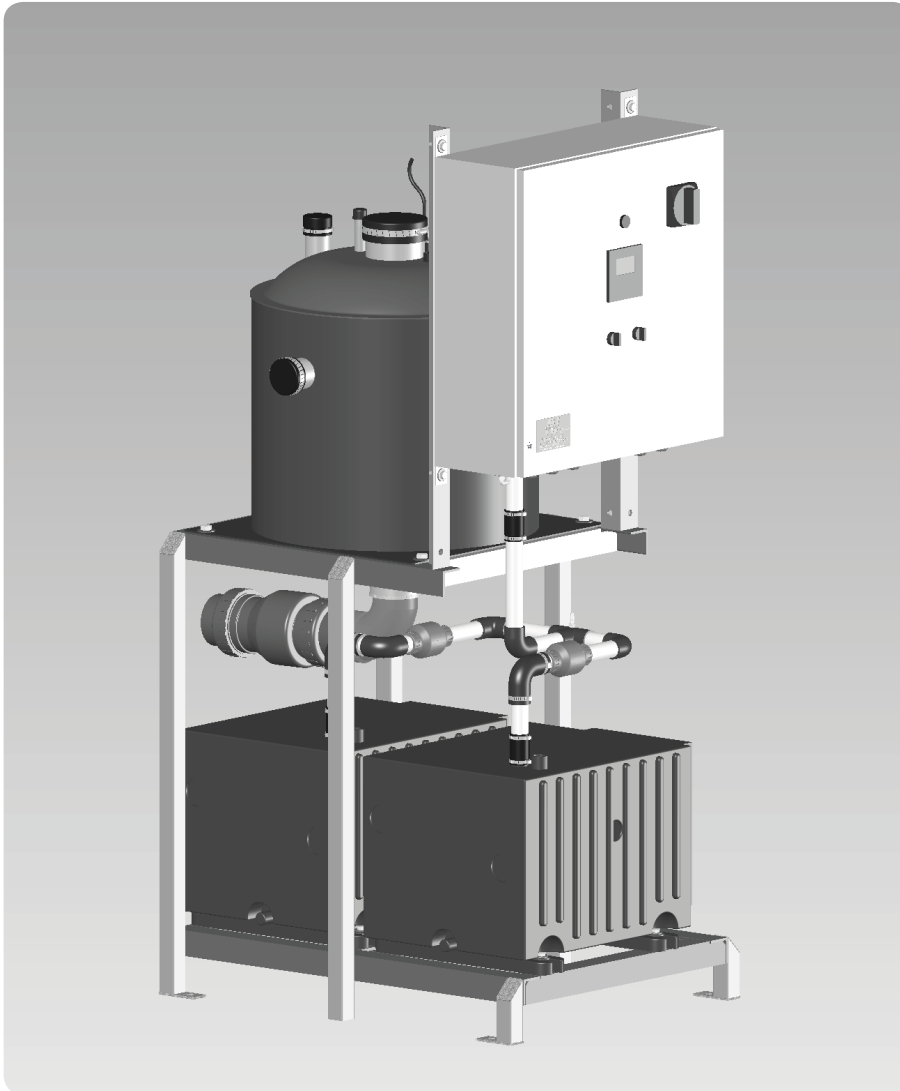
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AVAC3100-121



Product Description

Single frame factory assembled vacuum centre consists of a single 115 litre Type 304 stainless steel waste collection tank, two 1.2 kW recirculating water sealed liquid ring vacuum pumps and a PLC driven automatic control panel.

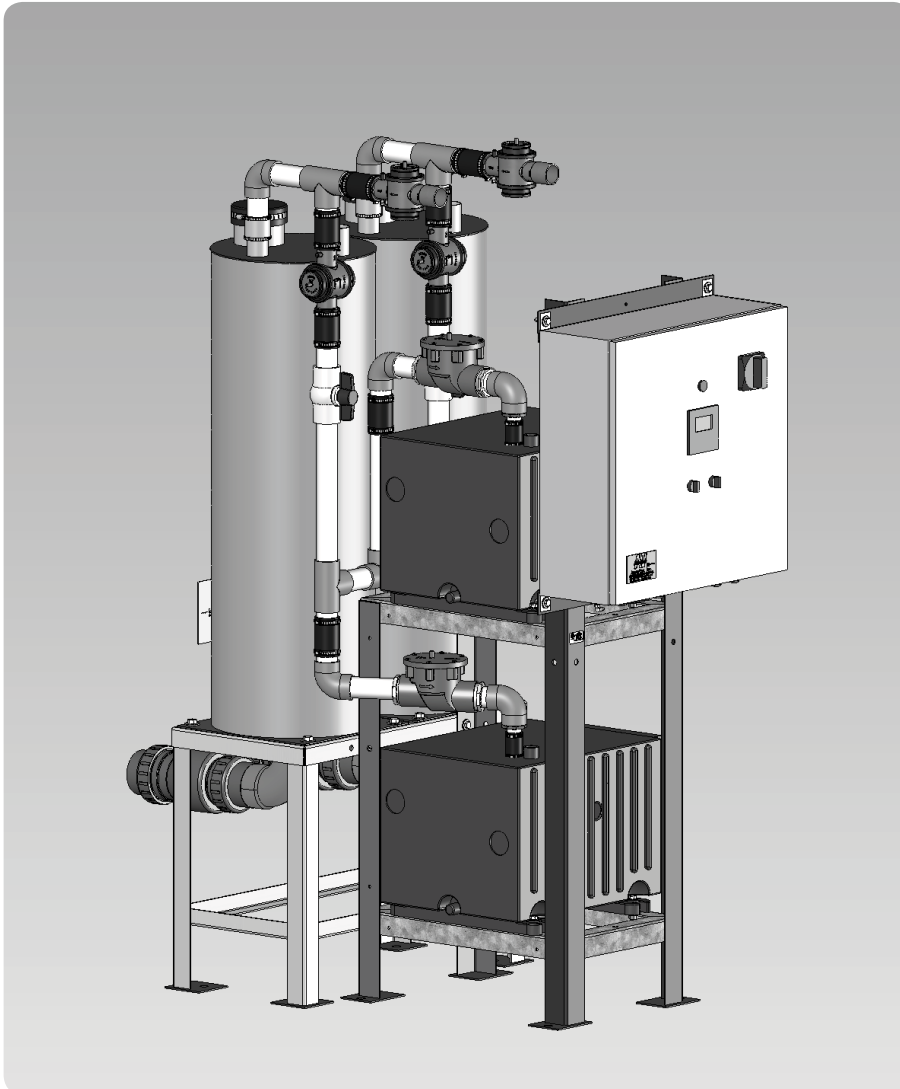
Features:

- Compact Design:
1040mm Long x 700mm Wide x 1800mm Tall
- System Weights:
Dry: 300kg
Wet: 475kg
- 115 litre Type 304 stainless steel waste collection tank has DN50 pipe size side waste inlet connection and DN80 swing check waste outlet connection.
- Dual 1.2 kW vacuum pumps each have a DN15 water supply inlet for pump water jacket fill float valve and a DN15 overflow outlet. Pump water is fully recirculated through a cooling system requiring no continuous water supply.
- Industrial grade panel has PLC driven automation control of vacuum pumps and waste collection and discharge cycles. Panel includes a main disconnect, an alarm light, HOA switches, and an operator interface with digital display which shows vacuum system pressure and alarm status.
- Available 3-Phase 50 Hz Voltages:
415 VAC – 6.5 FLA

Descriptions						
Collection Tanks	Vacuum Pumps				Capacity*	
Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
1	115	Liquid Ring	1	1.2	18	18 LPM

*The maximum capacity of each system is based on maximum load point value or "LPV" and maximum continuous flow rate.

AVAC3100-221



Product Description

Fully redundant factory assembled vacuum centre consists of one frame having two 115 litres Type 304 stainless steel waste collection tanks bolted to second frame having two 1.2 kW recirculating water sealed liquid ring vacuum pumps and a PLC driven automatic control panel.

Features:

- Fully Redundant & Compact Design: 1540mm Long x 810mm Wide x 1900mm Tall
- System Weights:
Dry: 300kg
Wet: 600kg
- Dual 115 litres Type 304 stainless steel waste collection tanks each have a DN50 pipe size top waste inlet connection and DN80 swing check waste outlet connection.
- Dual 1.2 kW vacuum pumps each have a DN15 water supply inlet for pump water jacket fill I flo at valve and a DN15 over flo w outlet. Pump water is fully recirculated through a cooling system requiring no continuous water supply.
- Industrial grade panel has PLC driven automation control of vacuum pumps and waste collection and discharge cycles. Panel includes a main disconnect, an alarm light, HOA switches and an operator interface with digital display which shows vacuum system pressure and alarm status.
- Available 3-Phase 50 Hz Voltages: - 415 VAC – 6.5 FLA

Descriptions						
Collection Tanks	Vacuum Pumps				Capacity*	
Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
2	115	Recirculating Liquid Ring	2	1.2	30	50 LPM

*The maximum capacity of each system is based on maximum load point value or "LPV" and maximum continuous flow rate.

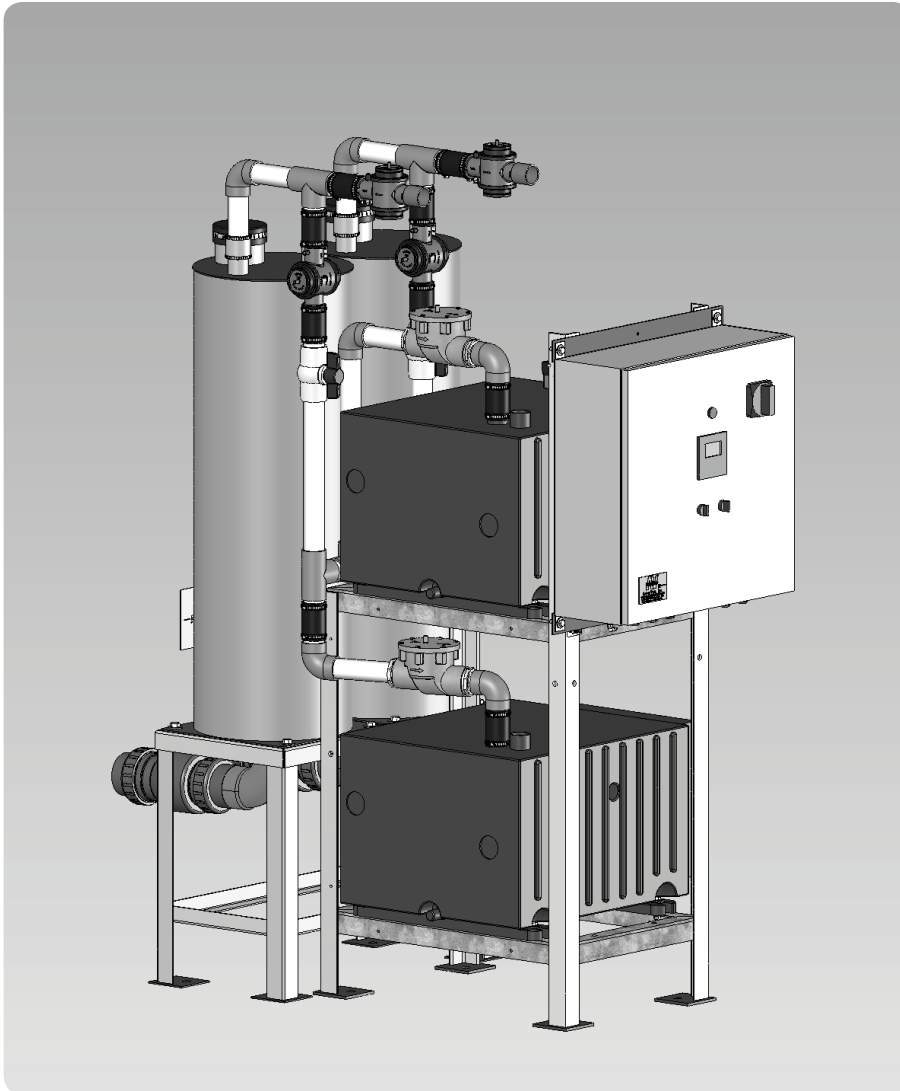
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AVAC3101-221



Product Description

Fully redundant factory assembled vacuum center consists of one frame having two 115 litre Type 304 stainless steel waste collection tanks bolted to second frame having two 1.8 kW recirculating water sealed liquid ring vacuum pumps and a PLC driven automatic control panel.

Features:

- Fully Redundant & Compact Design: 1650mm Long x 840mm Wide x 2000mm Tall
- System Weights: - Dry: 350kg - Wet: 650kg
- Dual 115 litres Type 304 stainless steel waste collection tanks each have a DN50 pipe size top waste inlet connection and DN80 swing check waste outlet connection.
- Dual 1.8 kW vacuum pumps each have a DN15 water supply inlet for pump water jacket fill float valve and a DN15 over flow outlet. Pump water is fully recirculated through a cooling system requiring no continuous water supply.
- Industrial grade panel has PLC driven automation control of vacuum pumps and waste collection and discharge cycles. Panel includes a main disconnect, an alarm light, HOA switches and an operator interface with digital display which shows vacuum system pressure and alarm status
- Available 3-Phase 50 Hz Voltages: - 415 VAC – 11.7 FLA

Descriptions						
Collection Tanks	Vacuum Pumps				Capacity*	
Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
2	115	Recirculating Liquid Ring	2	1.8	47	50 LPM

*The maximum capacity of each system is based on maximum load point value or "LPV" and maximum continuous flow rate.

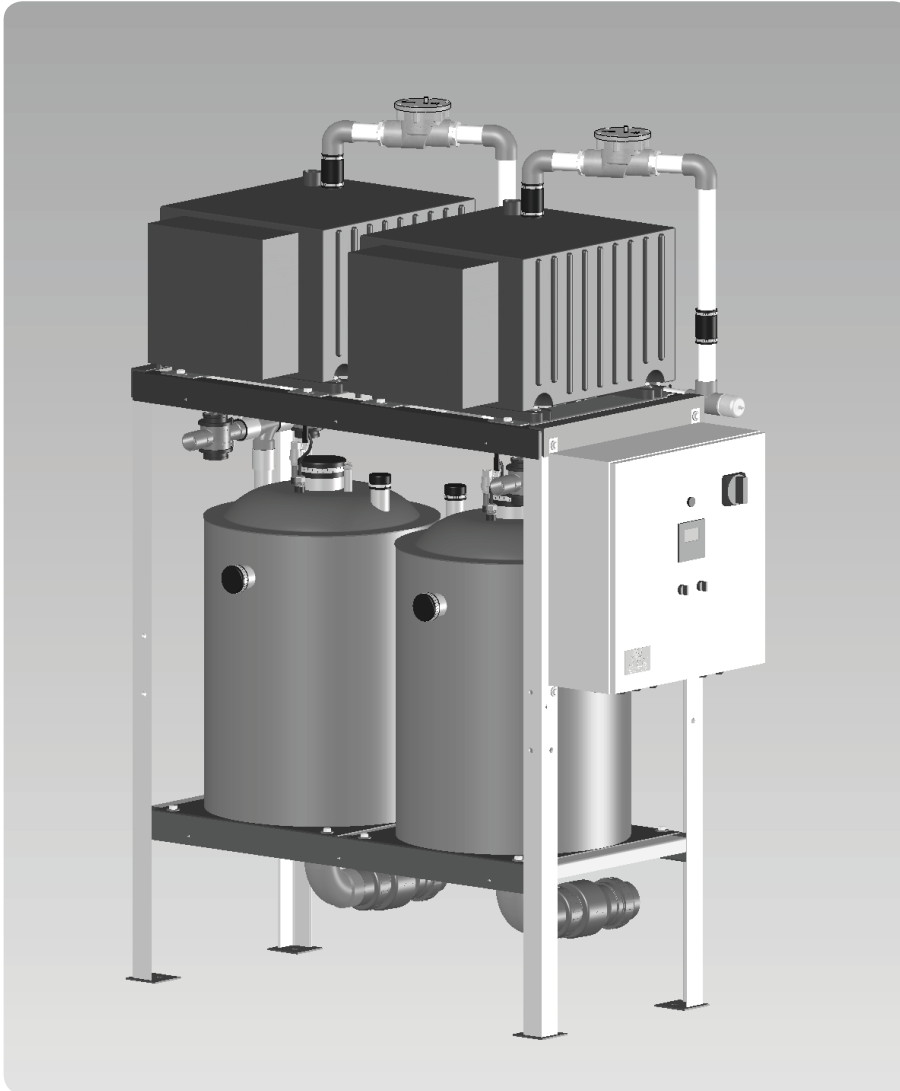
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AVAC3200-221



Product Description

- Fully redundant single frame factory assembled vacuum centre consists of two 230 litre Type 304 stainless steel waste collection tank, two 2.4 kW recirculating water sealed liquid ring vacuum pumps and a PLC driven automatic control panel.

Features:

- Fully Redundant Design: 1650mm Long x 915mm Wide x 2300mm Tall
- System Weights:
Dry: 450kg
Wet: 1050kg
- Dual 230 litre Type 304 stainless steel waste collection tanks each have a DN50 pipe size side waste inlet connection and DN80 swing check waste outlet connection.
- Dual 2.4 kW vacuum pumps each have a DN15 water supply inlet for pump water jacket fill float valve and a DN15 overflow outlet. Pump water is fully recirculated through a cooling system requiring no continuous water supply.
- Industrial grade panel has PLC driven automation control of vacuum pumps and waste collection and discharge cycles. Panel includes a main disconnect, an alarm light, HOA switches and an operator interface with digital display which shows vacuum system pressure and alarm status.
- Available 3-Phase 50 Hz Voltages: - 415 VAC – 19.9 FLA

Descriptions						
Collection Tanks	Vacuum Pumps				Capacity*	
Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
2	230	Recirculating Liquid Ring	2	2.4	65	100 LPM

*The maximum capacity of each system is based on maximum load point value or "LPV" and maximum continuous flow rate.

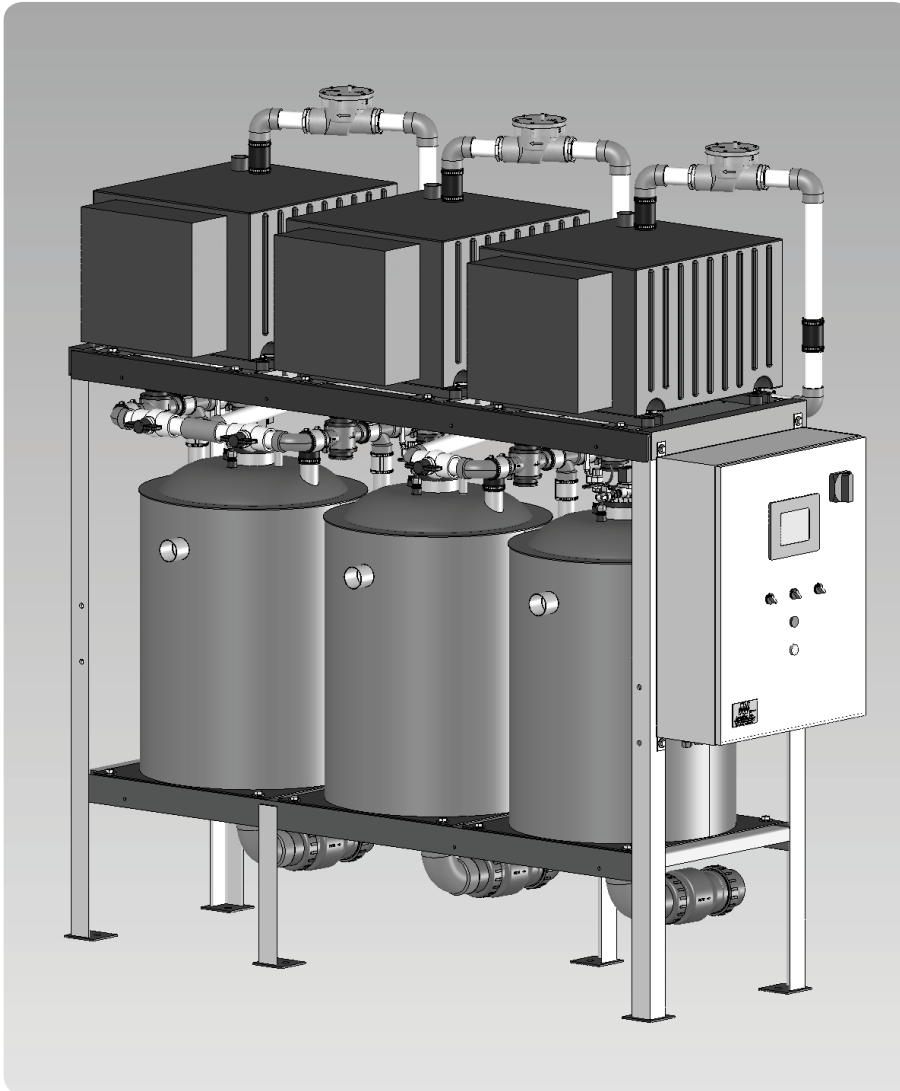
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AVAC3300-331



Product Description

High Capacity fully redundant single frame factory assembled vacuum centre consists of three 230 litre Type 304 stainless steel waste collection tank, three 2.4 kW recirculating water sealed liquid ring vacuum pumps and a PLC driven automatic control panel.

Features:

- High Capacity Fully Redundant Design: 2300mm Long x 915mm Wide x 2300mm Tall
- System Weights: - Dry: 650kg - Wet: 1500kg
- Triple 230 litre Type 304 stainless steel waste collection tanks each have a DN80 pipe size side waste inlet connection and DN80 swing check waste outlet connection.
- Triple 2.4 kW vacuum pumps each have a DN15 water supply inlet for pump water jacket fill float valve and a DN15 overflow outlet. Pump water is fully recirculated through a cooling system requiring no continuous water supply.
- Industrial grade panel has PLC driven automation control of vacuum pumps and waste collection and discharge cycles. Panel includes a main disconnect, an alarm light, HOA switches and an operator interface with digital display which shows vacuum system pressure and alarm status.
- Available 3-Phase 50 Hz Voltages: - 415 VAC – 29.8 FLA

Descriptions						
Collection Tanks	Vacuum Pumps				Capacity*	
Qty	Volume Litres/tank	Type	Qty	kW	Maximum "LPV"	Maximum Continuous Flow
3	230	Recirculating Liquid Ring	3	2.4	85	200 LPM

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