

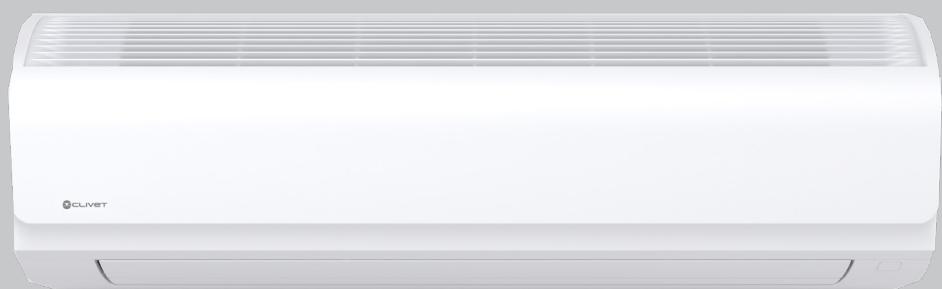


*Direct expansion indoor
unit for VRF*

Wall Mounted

GWMN-3-XY D15 ÷ D56

TECHNICAL BULLETIN



SIZE	D15	D22	D28	D36	D45	D56	D71	D80
COOLING CAPACITY kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	8.0
HEATING CAPACITY kW	1.7	2.4	3.2	4.0	5.0	6.3	8.0	9.0

General technical data

Model		GWMN-3-XY D15	GWMN-3-XY D22	GWMN-3-XY D28
Power supply		1-phase, 220-240V, 50Hz		
Cooling ¹	Capacity	kW	1.5	2.2
		kBtu/h	5.1	7.5
Heating ²	Power input	W	18	21
	Capacity	kW	1.7	2.4
Fan motor		kBtu/h	5.8	8.2
	Power input	W	18	21
Model		ZKSN-20-8-5L	ZKSN-20-8-5L	ZKSN-20-8-5L
Type		DC		
Number of rows		1	1	2&3
Fin spacing		mm	1.3	1.3
Indoor coil	Fin type	mm	Hydrophilic aluminum	
	Tube OD and type	mm	Φ7 Inner-groove	
Dimensions (L×H×W)		mm	530×170×95	530×170×95
Number of circuits			2	6
Air flow rate ³		m ³ /h	460/440/420/400/380/360/340	500/470/440/410/390/370/340
Sound pressure level ⁴		dB(A)	32/31/30/29/28/27	33/32/31/30/29/28/27
Sound power level		dB(A)	45/44/43/43/42/41/40	46/45/44/43/42/41/40
Unit		Net dimensions ⁵ (W×H×D)	mm	750×295×265
		Packed dimensions (W×H×D)	mm	875×385×360
Net/Gross weight		kg	9/11.5	10/12.5
Refrigerant type				
Throttle				
Design pressure (H/L)				
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	OD Φ16	

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured in an anechoic chamber.
5. The dimension is only the body size, excluding the size of the installation lug, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

General technical data

Model		GWMN-3-XY D36	GWMN-3-XY D45	GWMN-3-XY D56
Power supply		1-phase, 220-240V, 50Hz		
Cooling ¹	Capacity	kW kBtu/h	3.6 12.3	4.5 15.4
	Power input	W	27	30
Heating ²	Capacity	kW kBtu/h	4.0 13.6	5.0 17.1
	Power input	W	27	30
Fan motor	Model	ZKSN-20-8-5L	ZKSN-20-8-5L	ZKSN-20-8-5L
	Type		DC	
	Number of rows		2&3	
	Fin spacing	mm		1.33
Indoor coil	Fin type	mm	Hydrophilic aluminum	
	Tube OD and type	mm	Φ5 Inner-groove	
	Dimensions (L×H×W)	mm	530×170×95	730×170×95
	Number of circuits		6	6
Air flow rate ³	m ³ /h	580/540/500/460/420/380/340	720/670/620/560/510/460/410	860/780/700/620/550/480/410
Sound pressure level ⁴	dB(A)	37/36/34/33/31/30/28	37/35/33/32/31/30/29	41/39/37/35/33/31/29
Sound power level	dB(A)	54/53/51/50/48/46/44	54/52/50/49/48/46/44	56/54/52/50/48/46/44
	Net dimensions ⁵ (W×H×D)	mm	750×295×265	950×295×265
Unit	Packed dimensions (W×H×D)	mm	875×385×360	1075×385×360
	Net/Gross weight	kg	10/12.5	11.5/14
Refrigerant type		R410A/R32		
Throttle	Type	Electronic expansion valve		
Design pressure (H/L)	MPa	4.4/2.6		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	OD Φ16	

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured in an anechoic chamber.
5. The dimension is only the body size, excluding the size of the installation lug, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

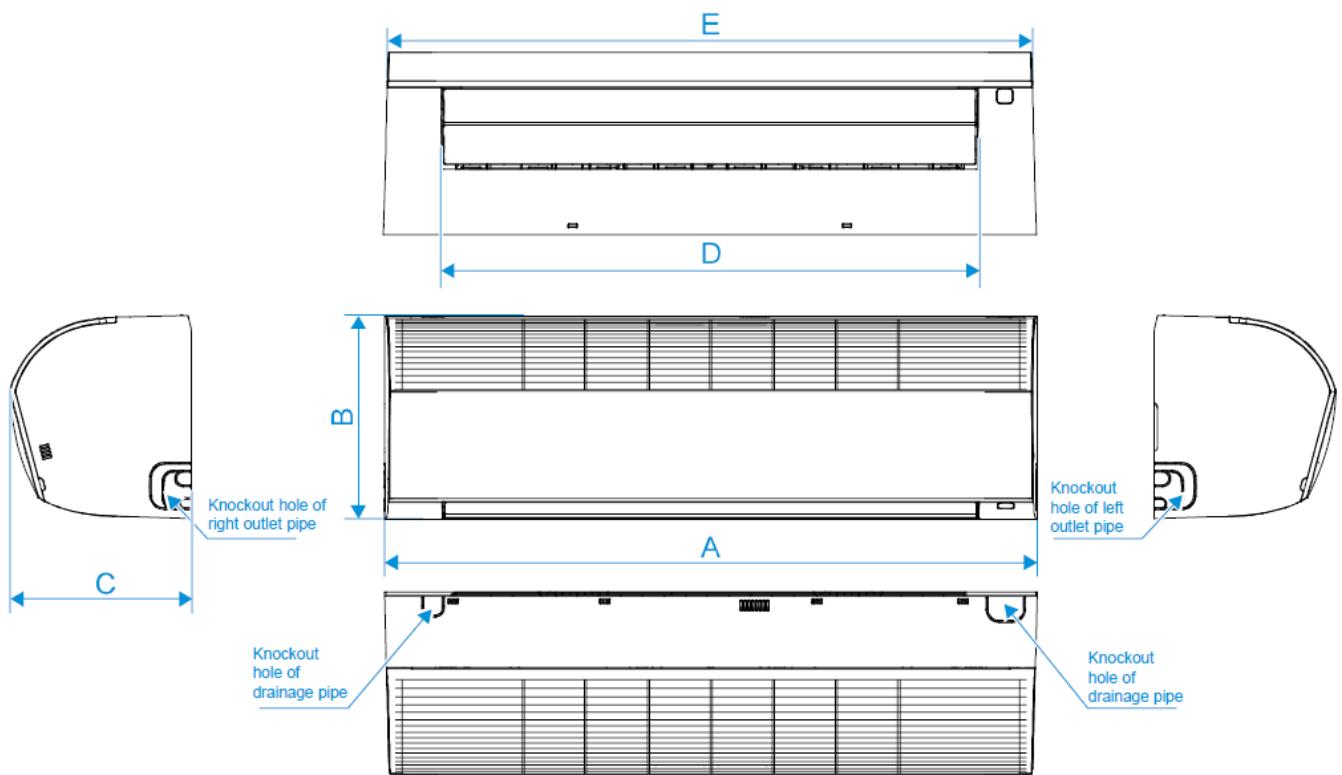
General technical data

Model	GWMN-3-XY D71		GWMN-3-XY D80
Power supply	1-phase, 220-240V, 50Hz		
Cooling ¹	Capacity	kW	7.1
		kBtu/h	24.2
Heating ²	Power input	W	50
		kW	8.0
Fan motor	Capacity	kBtu/h	27.3
		W	50
Indoor coil	Model	ZKSN-50-8-17L	
	Type	DC	
Unit	Number of rows	2&3	
	Fin spacing	mm	1.33
Packed dimensions (W×H×D)	Fin type	Hydrophilic aluminum	
	Tube OD and type	Φ5 Inner-groove	
Refrigerant type	Dimensions (L×H×W)	980×170×95	
	Number of circuits	8	
Air flow rate ³	m ³ /h	1220/1120/1030/940/850/750/660	
Sound pressure level ⁴	dB(A)	44/42/40/38/36/34/32	
Sound power level	dB(A)	58/56/54/52/50/48/46	
Pipe connections	Net dimensions ⁵ (W×H×D)	1200×295×265	
	Packed dimensions (W×H×D)	1315×385×360	
Throttle	Net/Gross weight	15/18	
	Type	Electronic expansion valve	
Design pressure (H/L)	MPa	4.4/2.6	
	Liquid/Gas pipe	Φ9.52/Φ15.9	
Drain pipe	mm		
	mm	OD Φ16	

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Fan motor speed and air flow rate are from the highest speed to the lowest speed, total 7 rates for each model.
4. Sound pressure level is from highest level to lowest level, total 7 levels for each model. Sound pressure level is measured in an anechoic chamber.
5. The dimension is only the body size, excluding the size of the installation lug, connecting copper pipe, etc. For detailed dimensions, please refer to the installation manual.

Dimensions



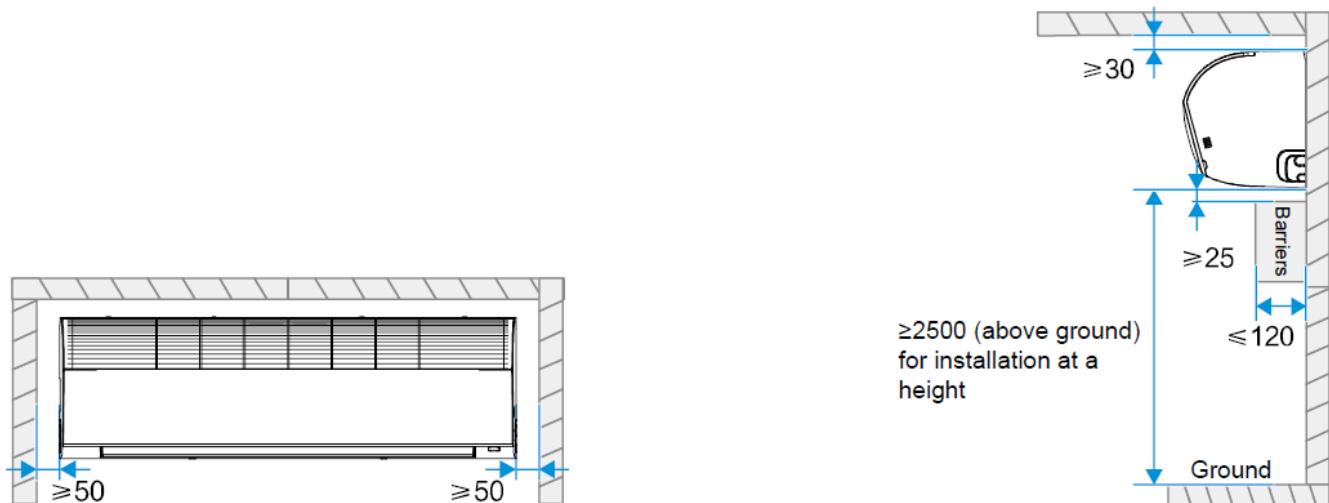
MODEL	A	B	C	D	E
D15 ÷ D36	750	295	265	581	736
D45 ÷ D56	950	295	265	781	936
D71 ÷ D80	1200	295	265	1025	1186

Placement Considerations

Unit placement should take account of the following considerations:

- Units should not be installed in the following locations:
 - A place filled with mineral oil, fumes or mist, like a kitchen.
 - A place where there are corrosive gases, such as acid or alkaline gases..
 - A place exposed to combustible gases and using volatile combustible gases such as diluent or gasoline.
 - A place where there is equipment emitting electromagnetic radiation.
 - A place where there is a high salt content in the air like a coast.
 - Do not use the air conditioner in an environment where an explosion may occur.
 - Places like in vehicles or cabin rooms.
 - Factories with major voltage fluctuations in the power supplies.
 - Other special environmental conditions.
- Units should be installed in positions where:
 - Ensure that the airflow in and out of the IDU is reasonably organized to form an air circulation in the room.
 - Ensure IDU maintenance space.
 - The nearer the drainage pipe and copper pipe are to the ODU, the lower the pipe cost is.
 - Prevent the air conditioner from blowing directly to the human body.
 - The closer the wiring to the power cabinet, the lower the wiring cost is.
 - Keep the air-conditioning return air away from the setting sun of the room.
 - Be careful not to interfere with the light tank, fire pipe, gas pipe and other facilities.
 - The IDU should not be lifted in the places like load-bearing beam and columns that affect the structural safety of the house.
 - The wired controller and the IDU should be in the same installation space; otherwise, the sampling point setting of the wired controller need to be changed.

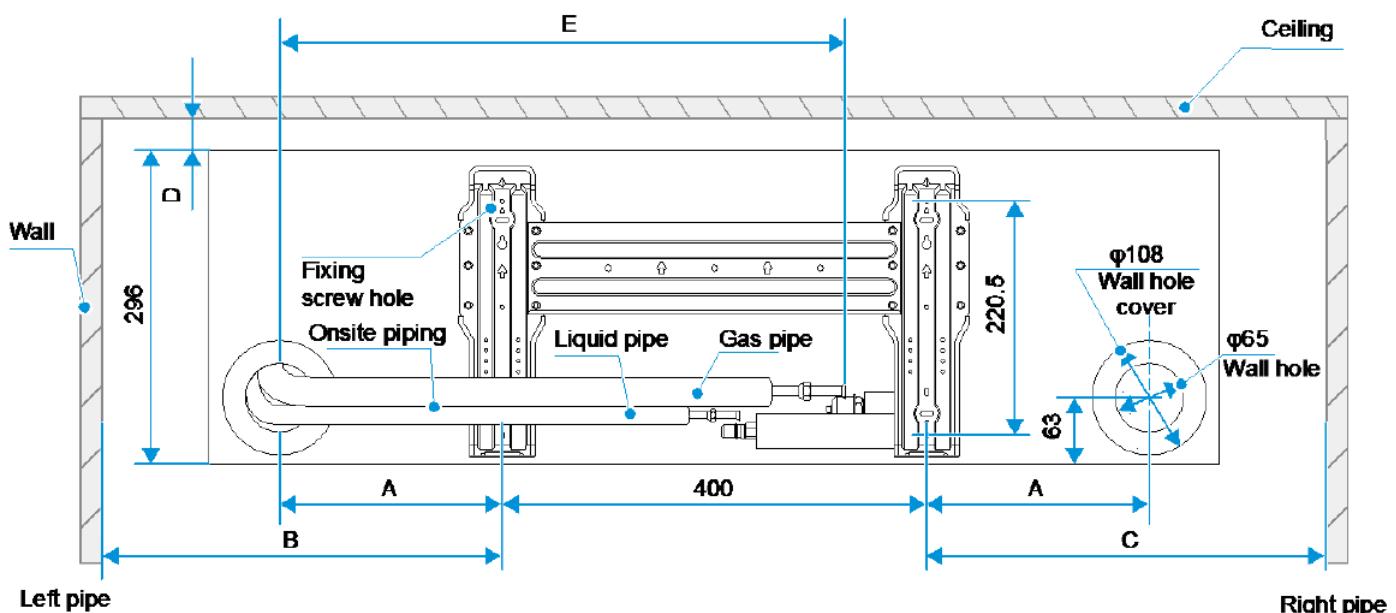
Space Requirements



1. The centerline of the maintenance hole should be in the same position as the centerline of the indoor unit.
2. The dimensions of A are shown in Table 2.1

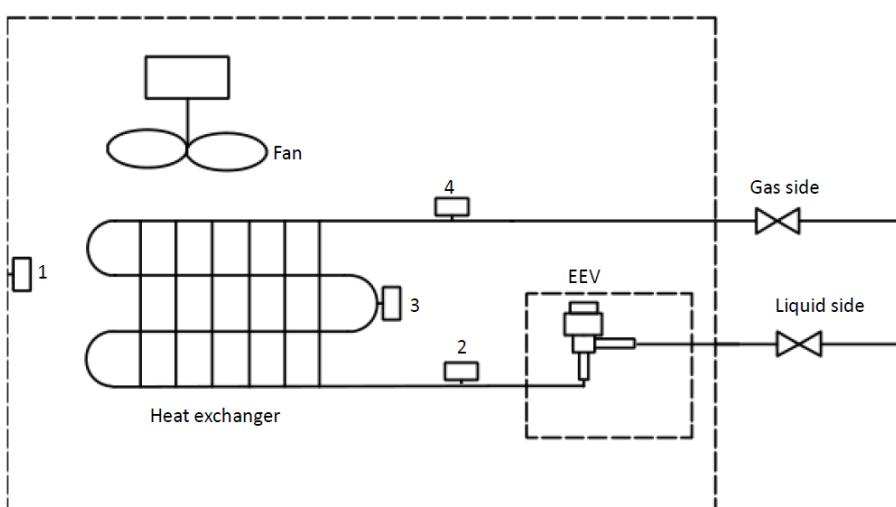
Unit Placement

Positioning of mounting plate:



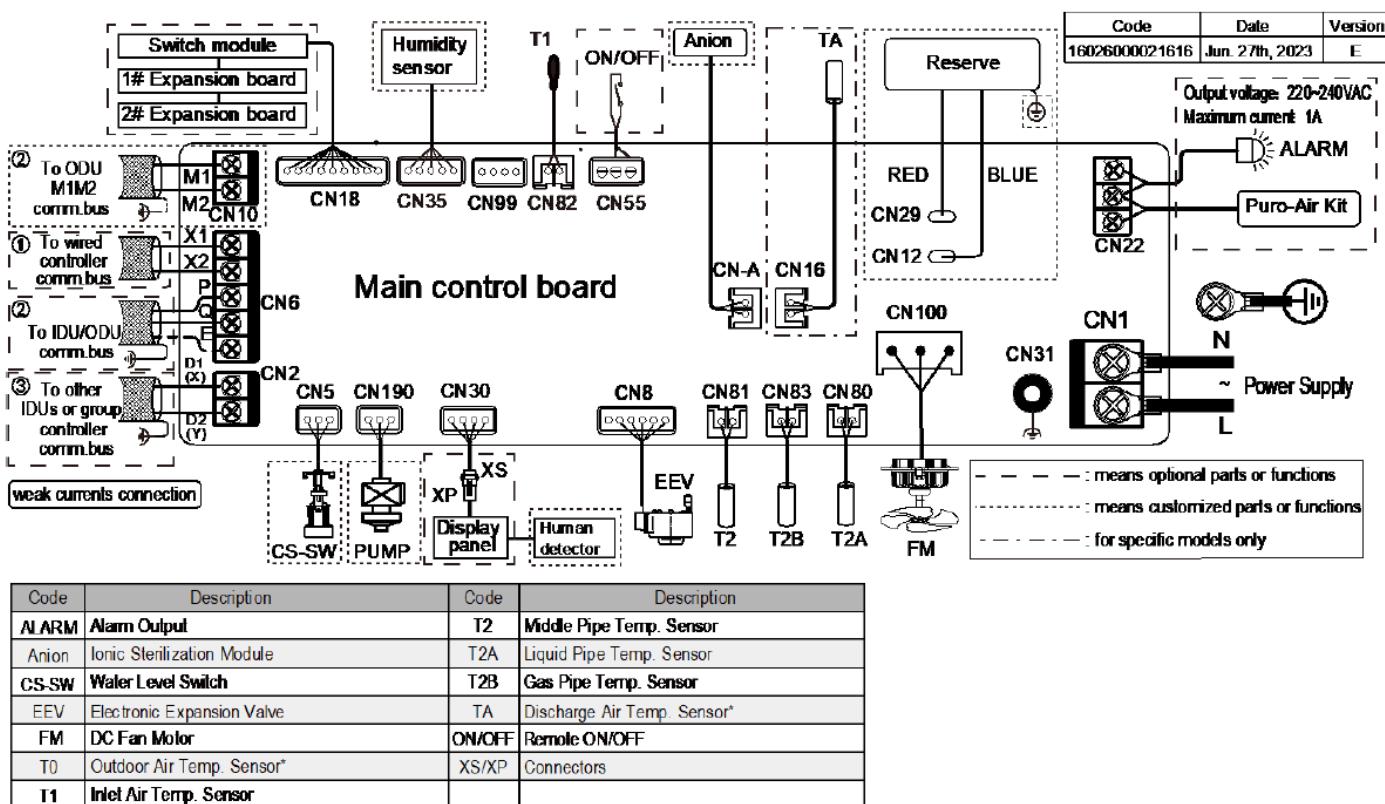
Capacity (kW)	Distance (mm)					Reserved lengths for power and signal cables	
	A	B	C	D	E	Left out pipe	Right out pipe
KW≤3.6	100	≥225	≥225	≥30	230	≥1115	≥415
3.6 < KW≤5.6	180	≥325	≥325	≥30	412	≥1315	≥415
5.6 < KW≤8.0	220	≥375	≥375	≥30	400	≥1565	≥415

Piping Diagram



LEGEND

1	T1	Inlet Air Temp. Sensor
2	T2A	Liquid Pipe Temp. Sensor
3	T2	Middle Pipe Temp. Sensor
4	T2B	Gas Pipe Temp. Sensor



Notes for installers and service engineers

Caution

- All installation, servicing and maintenance must be carried out by competent and suitably qualified, certified and accredited professionals and in accordance with all applicable legislation.
- Units should be grounded in accordance with all applicable legislation. Metal and other conductive components should be insulated in accordance with all applicable legislation.
- Power supply wiring should be securely fastened at the power supply terminals loose power supply wiring would represent a fire risk.
- After installation, servicing or maintenance, the electric control box cover should be closed. Failing to close the electric control box cover risks fire or electric shock.
- The dotted lines indicate the field wiring or optional function
- D1D2 communication ports are used for group control communication. When connecting the group controller, the D1D2 port of the indoor units that are to be group controlled must be connected in daisy chain, and the group controller must be connected to the X1X2 port of one of the indoor units in the group control, and set to group control mode. In addition, D1D2 communication ports can also be connected to the central controller.

Capacity Tables

Cooling Capacity Table

MODEL	Indoor air temperature (°C WB/DB)													
	14/20		16/23		18/26		19/27		20/28		22/30		24/32	
	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
GWMN-3-XY D15	1.4	1.4	1.5	1.4	1.5	1.4	1.5	1.3	1.6	1.3	1.6	1.2	1.6	1.1
GWMN-3-XY D22	2.0	1.9	2.1	2.0	2.2	2.0	2.2	1.9	2.3	1.9	2.3	1.7	2.4	1.7
GWMN-3-XY D28	2.5	2.4	2.7	2.5	2.8	2.5	2.8	2.4	2.9	2.4	2.9	2.2	3.0	2.1
GWMN-3-XY D36	3.2	3.1	3.4	3.1	3.6	3.2	3.6	3.0	3.7	3.0	3.8	2.8	3.9	2.7
GWMN-3-XY D45	4.0	3.7	4.3	3.8	4.5	3.8	4.5	3.7	4.6	3.6	4.7	3.4	4.8	3.3
GWMN-3-XY D56	5.0	4.6	5.3	4.7	5.6	4.8	5.6	4.6	5.7	4.5	5.8	4.2	6.0	4.1
GWMN-3-XY D71	6.3	5.9	6.7	6.0	7.0	6.0	7.1	5.9	7.2	5.7	7.4	5.4	7.6	5.2
GWMN-3-XY D80	7.1	6.6	7.6	6.8	7.9	6.8	8.0	6.6	8.1	6.4	8.3	6.1	8.5	5.8

Abbreviations:

TC: Total capacity (kW)

SC: Sensible capacity(kW)

Notes:

1.Shaded cells indicate rating condition.

Heating Capacity Table

MODEL	Indoor air temperature (°C DB)					
	16		18		20	
	TC	TC	TC	TC	TC	TC
GWMN-3-XY D15	1.8	1.8	1.7	1.6	1.6	1.5
GWMN-3-XY D22	2.6	2.6	2.4	2.3	2.3	2.1
GWMN-3-XY D28	3.4	3.4	3.2	3.1	3.0	2.8
GWMN-3-XY D36	4.2	4.2	4.0	3.8	3.8	3.5
GWMN-3-XY D45	5.3	5.3	5.0	4.8	4.7	4.4
GWMN-3-XY D56	6.7	6.6	6.3	6.1	5.9	5.5
GWMN-3-XY D71	8.5	8.4	8.0	7.8	7.5	7.0
GWMN-3-XY D80	9.5	9.5	9.0	8.7	8.5	7.8

Abbreviations:

TC: Total capacity (kW)

Notes:

1.Shaded cells indicate rating condition.

Electrical characteristics

MODEL	Power supply					Indoor fan motors		
	Hz	Volts	Min. volts	Max. volts	MCA	MFA	Rated motor output (kW)	FLA
GWMN-3-XY D15	50	220-240	198	264	0.28	15	20	0.22
GWMN-3-XY D22	50	220-240	198	264	0.29	15	20	0.23
GWMN-3-XY D28	50	220-240	198	264	0.36	15	20	0.29
GWMN-3-XY D36	50	220-240	198	264	0.39	15	20	0.31
GWMN-3-XY D45	50	220-240	198	264	0.41	15	20	0.33
GWMN-3-XY D56	50	220-240	198	264	0.51	15	20	0.41
GWMN-3-XY D71	50	220-240	198	264	0.69	15	50	0.55
GWMN-3-XY D80	50	220-240	198	264	0.98	15	50	0.78

Abbreviations:

MCA: Minimum Circuit Amps MFA: Maximum Fuse Amps FLA: Full Load Amps

Notes:

Voltage range: Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.

Maximum allowable voltage variation between phases is 2%.

Selection wire size based on the value of MCA.

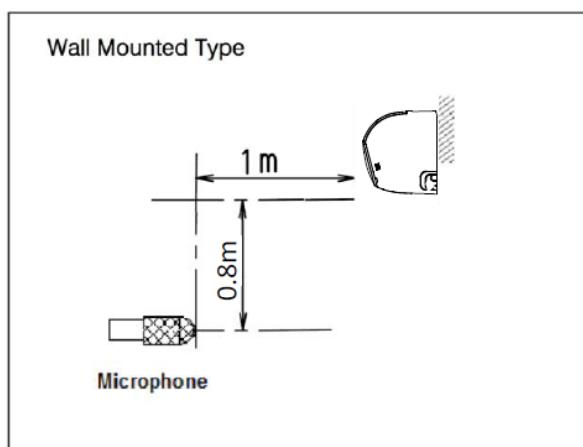
MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth circuit breaker).

Sound Level

Overall

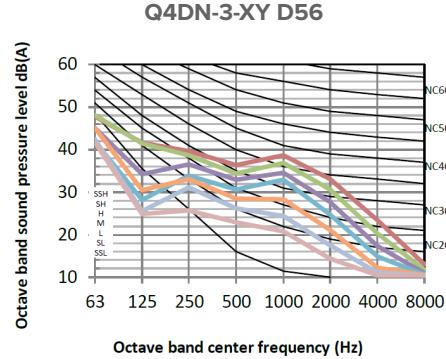
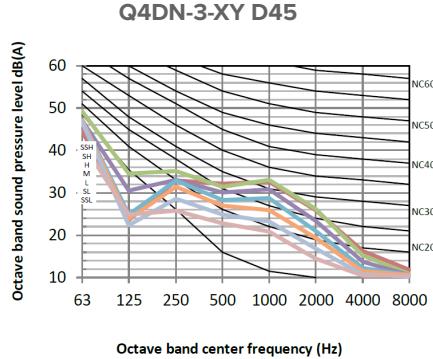
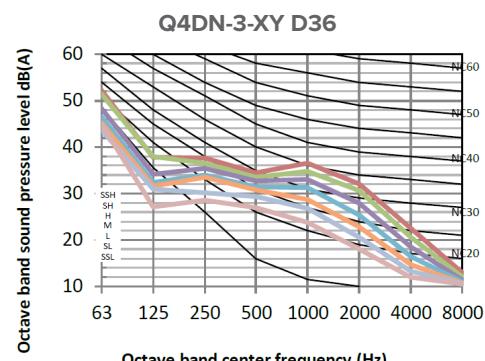
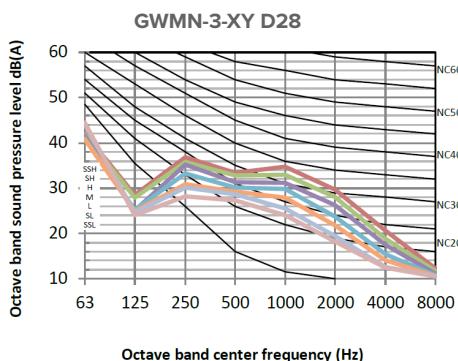
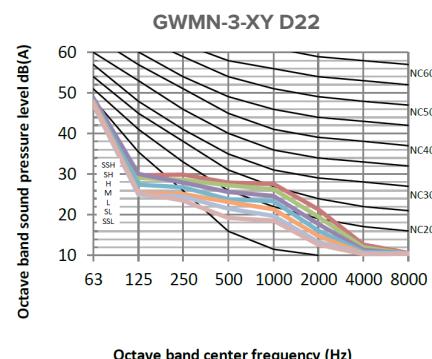
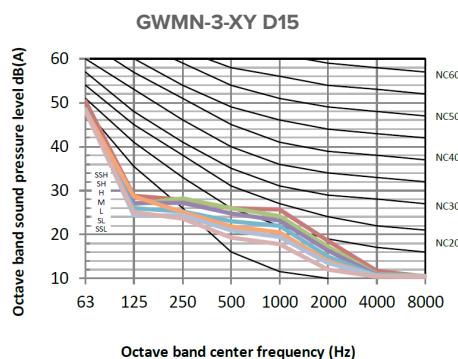
MODEL	Sound pressure levels dB						
	SSH	SH	H	M	L	SL	SSL
GWMN-3-XY D15	32	31	30	30	29	28	27
GWMN-3-XY D22	33	32	31	30	29	28	27
GWMN-3-XY D28	35	34	33	32	31	30	28
GWMN-3-XY D36	37	36	34	33	31	30	28
GWMN-3-XY D45	37	35	33	32	31	30	29
GWMN-3-XY D56	41	39	37	35	33	31	29
GWMN-3-XY D71	44	42	40	38	36	34	32
GWMN-3-XY D80	45	43	41	39	37	35	32

Wall mounted sound pressure level measurement



Sound Level

Octave Band Levels



Temperature and Airflow Distributions

Simulate condition

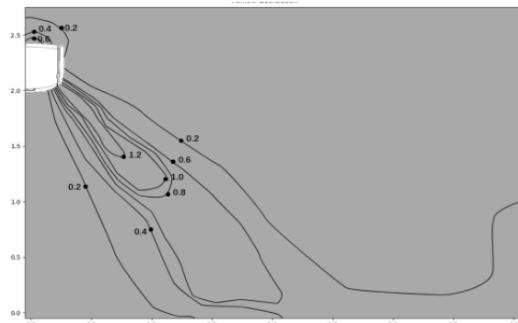
MODEL NAME	Room size (m)	Ceiling height (m)	Flow angle (Cooling/Heating)	Placing
GWMN-3-XY D15	4×4	2.7	58°/88°	Wall mounted
GWMN-3-XY D22	4.5×4.5	2.7	58°/88°	Wall mounted
GWMN-3-XY D28	5×5	2.7	58°/88°	Wall mounted
GWMN-3-XY D36	5.5×5.5	2.7	58°/88°	Wall mounted
GWMN-3-XY D45	6×6	2.7	58°/88°	Wall mounted
GWMN-3-XY D56	8×8	2.7	58°/88°	Wall mounted
GWMN-3-XY D71	8×8	2.7	58°/88°	Wall mounted
GWMN-3-XY D80	8×8	2.7	58°/88°	Wall mounted

Note:

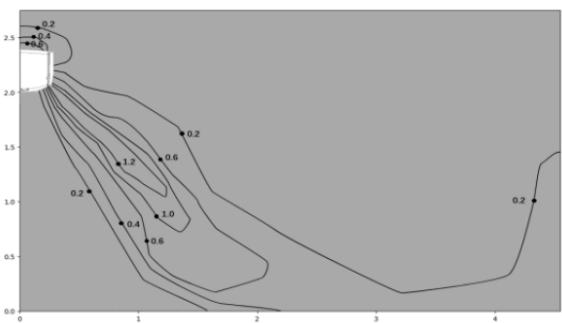
1. These figures and videos are based on software simulation. They show typical temperature and airflow distributions in the conditions above. In the actual installation, they may differ from these figures and videos under the influence of air temperature conditions, ceiling height, cooling/heating load, obstacles, etc.

Airflow distributions - Cooling (after 300s)

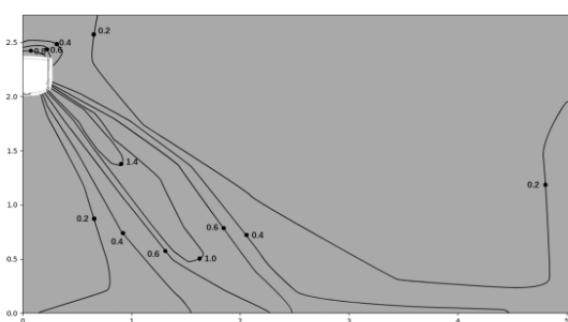
GWMN-3-XY D15



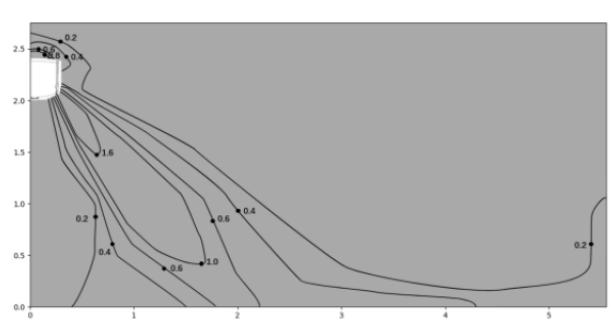
GWMN-3-XY D22



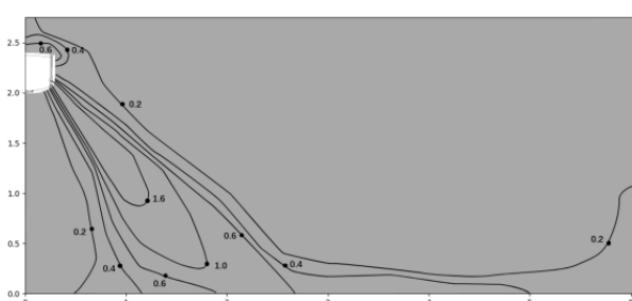
GWMN-3-XY D28



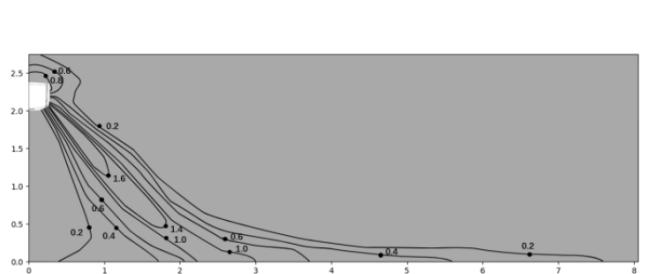
GWMN-3-XY D36



GWMN-3-XY D45

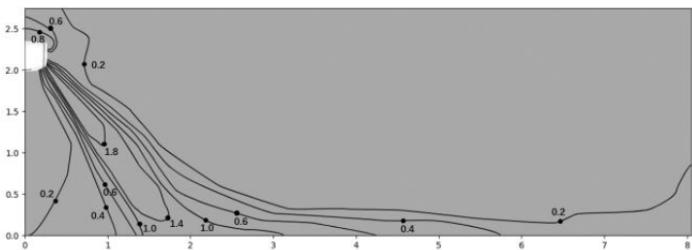


GWMN-3-XY D56

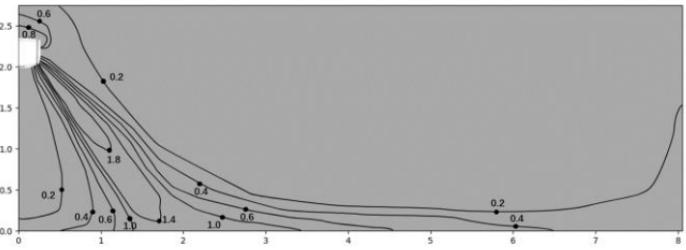


Temperature and Airflow Distributions

GWMN-3-XY D71

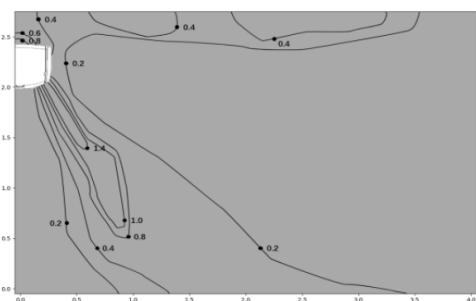


GWMN-3-XY D80

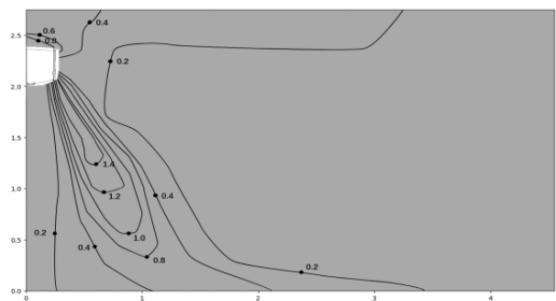


Airflow distributions - Heating (after 300s)

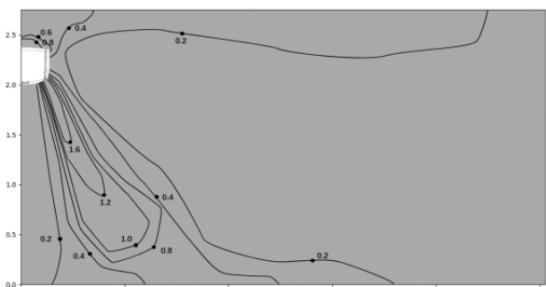
GWMN-3-XY D15



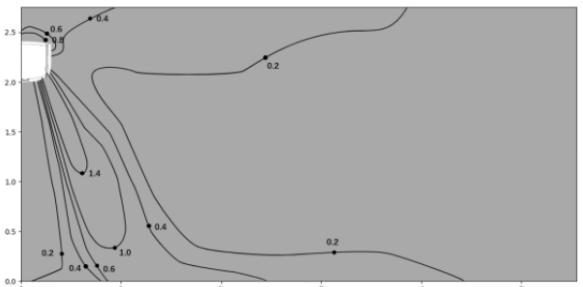
GWMN-3-XY D22



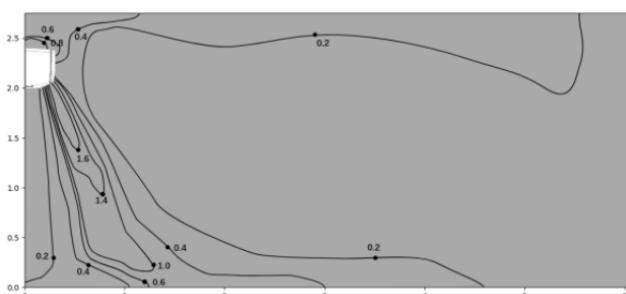
GWMN-3-XY D28



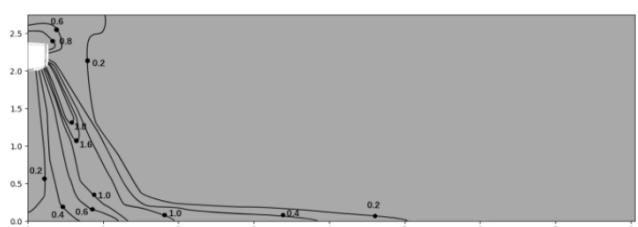
GWMN-3-XY D36



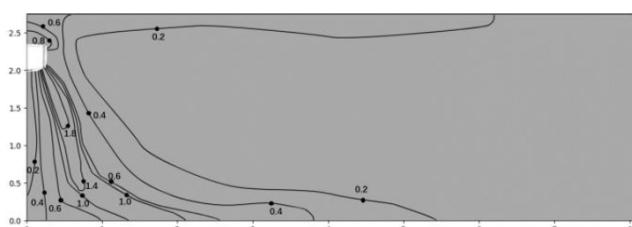
GWMN-3-XY D45



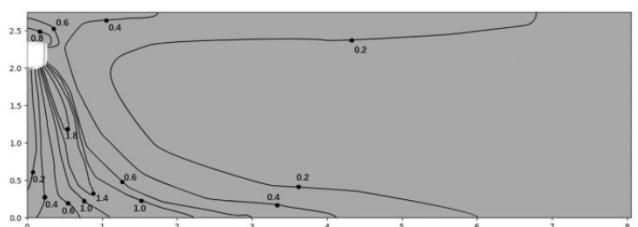
GWMN-3-XY D56



GWMN-3-XY D71



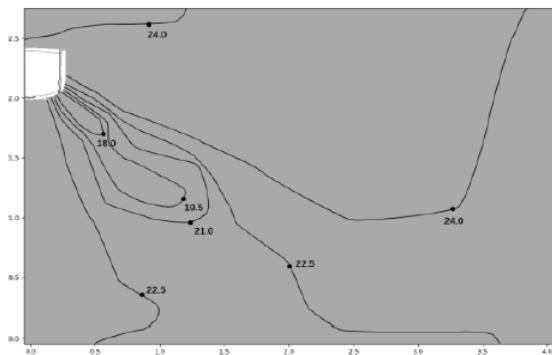
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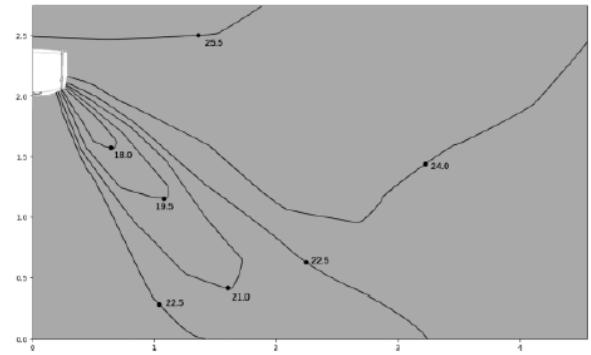
Temperature and Airflow Distributions

Temperature distributions - Cooling (after 300s)

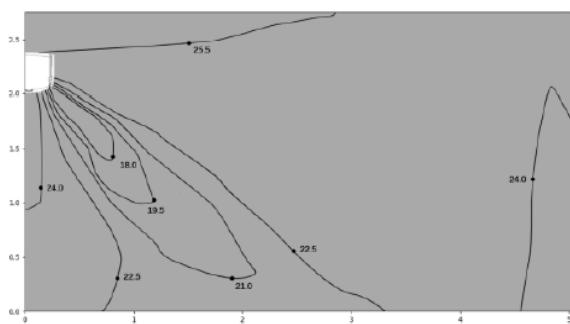
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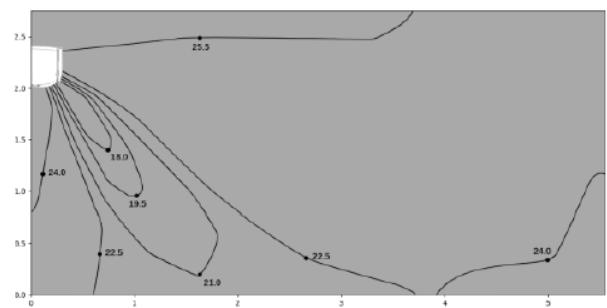
GWMN-3-XY D22



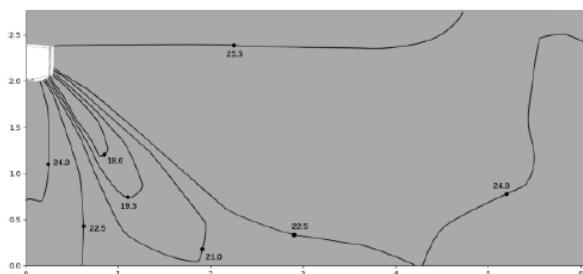
GWMN-3-XY D28



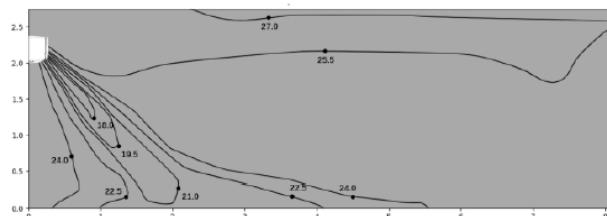
GWMN-3-XY D36



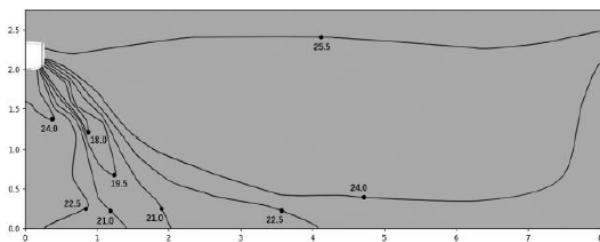
GWMN-3-XY D45



GWMN-3-XY D56



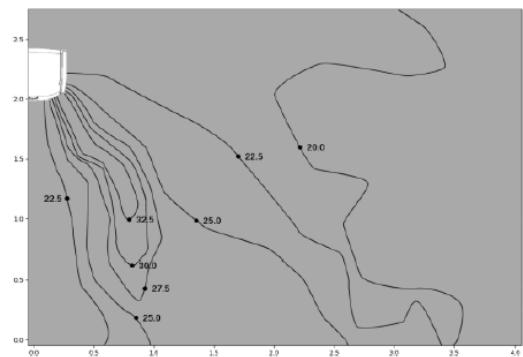
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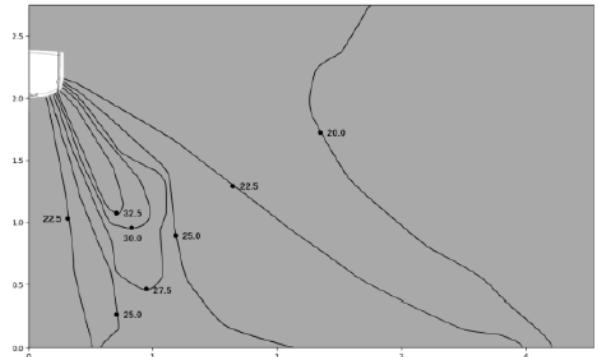
Temperature and Airflow Distributions

Temperature distributions - Heating (after 300s)

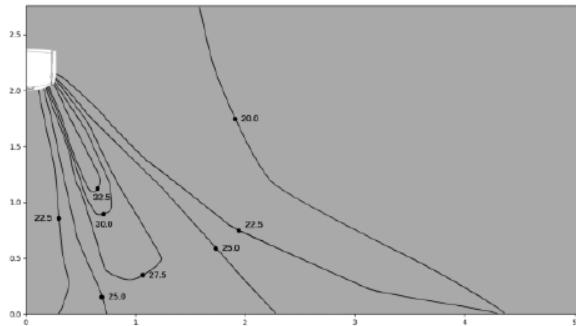
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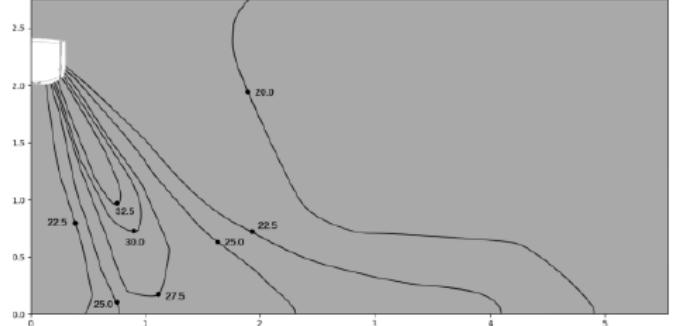
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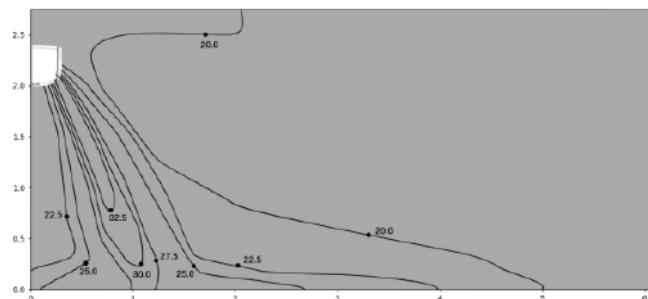
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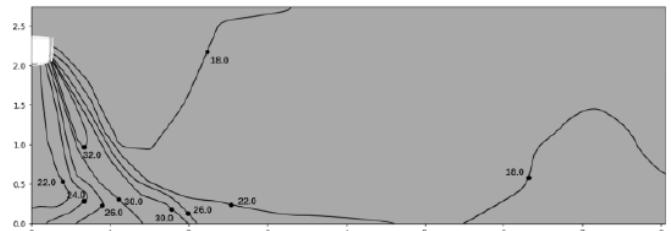
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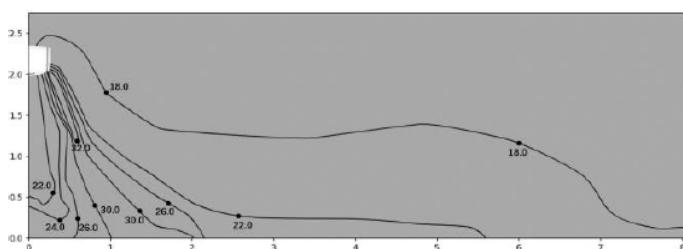
GWMN-3-XY D45



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