CHILLED WATER VERTICAL FAN COILS

Models:
MFU-C MFU-H
MFC-C MFC-H

McQuay®
Air Conditioning

Contents

Note: Installation and maintenance are to be performed only by qualified personal who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution: Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning: Moving machinery and electrical power hazards. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

Vertical Flow Fan Coil

The New Shape Of Wellness

The new series F of fan coil with vertical air flow is characterised by flexibility in performance and quiet operation to offer a total wellness. It represents one of the most cost-effective solutions to provide a comfortable environment for both commercial and residential applications.

The series features 8 sizes, with cabinet for floor or wall installation and chassis for concealed installations.
The units are available in the 2-pipe version with 3 or 4-row coil – nominal cooling capacity from 1.3 to 8.0kW; nominal heating capacity from 2.2 to 12.0kW – or in the 4-pipe version – nominal cooling capacity from 1.2 to 8.0kW; nominal heating capacity from 2.3 to 13.0kW. 2-pipe version models can also be equipped with electrical heaters, from 0.8 to 3.0kW.

The AC2800/AC2800B controllers have been set according to the unit configuration:
- cooling or heating for 2-pipe application (without auxiliary electrical heater)
- cooling or heating for 2-pipe application (with auxiliary electrical heater)
- cooling or heating for 4-pipe application
- 2-way or 3-way valve with ON/OFF control

Activating all parameters and routines of regulation which optimise the operation of the unit.
Through AC2800 units can also be directly integrated with Smart Manager, McQuay solution for the supervision of hydronic systems. With reference to fan coils, Smart Manager run up to 50 mini-chillers and 120 fan coils.

Nomenclature

McQuay — M

Fan Coil Type
F = Vertical Air Flow

Configuration
U = With Cabinet
C = Concealed

Cooling Coil
0 = 3 row
4 = 4 row

Electric Heaters
0 = Without El.Heaters
H = With El.Heaters

Version
C = 2-pipe
H = 4-pipe

Size
Air Flow [CFM] x 10

M F U 0 12 C H
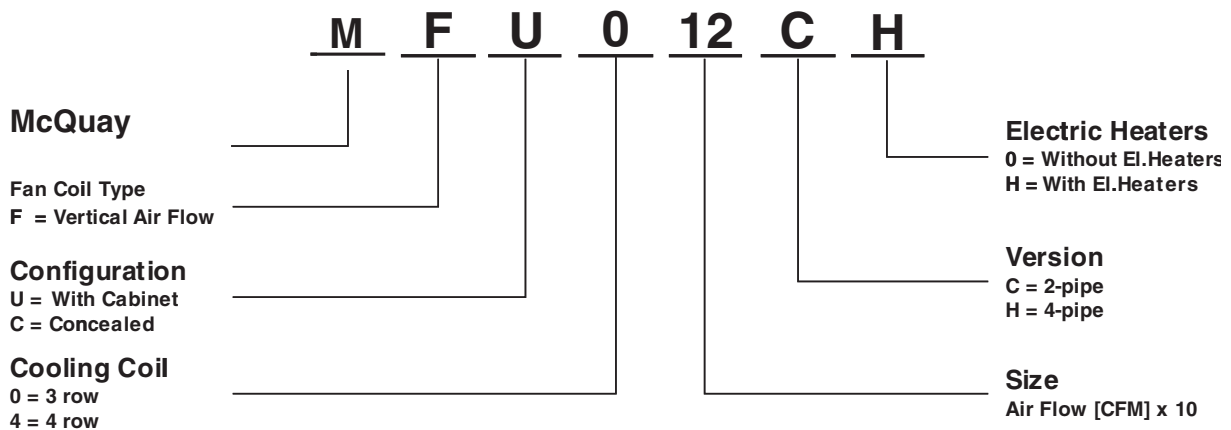
General Characteristics

Design

The design, elegant and considered in all details, harmonises well with all types of interiors.

Covers, grids and cabinet materials have been selected with a special care to grant both the quality of the finishing and the durability of the product.

Cover and grids are realised in ABS, RAL103; the cabinet is made of pre-painted sheet metal finished with high quality paint, RAL1013.

Filter

The filter, located at the bottom of the unit, is easily accessible and self-locking, therefore no tools are required for removing and re-assembling it.

The filter material grade is G1 and thanks to its pleated surface grants a filtration surface up to 60% greater than traditional filters resulting in lower pressure drop and reduced noise emission.

Connections

Units are available with left or right hand water connections, which can be easily switched in the field if required. Connections are equipped with air vents and drainage valves.

Controllers

AC2800 Electronic Controller (Optional)

Among the features of AC2800 controllers are:

- Selectable temperature range: 10-30°C or 16-30°C (through selecting J4, default: close/16-30°C).
- 2-pipe/4-pipe model (through selecting J1 and J2).
- Auxiliary electrical heater enable/disable (only for 2-pipe model, through selecting J3, default: open/disable, if enable, it output from terminal 5).
- Cool/heat mode.
- Fan speed can be set at high/medium/low.
- Sensor failure alarm.
- LEDs show running state:
    1. The three blue LEDs show fan speed high/medium/low.
    2. The dichromatic LED shows heat and cool mode: the red LED shows heat mode, the green LED shows cool mode.
    3. The red LED shows ON/OFF of the system.
    4. The room sensor failure alarm: High speed LED blinks and shuts off all outputs.
       The water sensor failure alarm: Medium speed LED blinks and shuts off all outputs.
    5. Mode conflict: the mode LED blinks and shuts off all outputs.
- Smart manager integration

General Characteristics

AC2800B Electronic Controller

Temperature range: 16-30°C.

2-pipe/4-pipe model (through selecting J1 and J2).

Auxiliary electrical heater enable/disable (only for 2-pipe model, through selecting J3, default: open/disable, if enable, it output from terminal 5).

Cool/heat mode.

Fan speed can be set at high/medium/low.

Cold draft protection (under heat mode, the fan can run only when the water temperature is above 30°C).

Sensor failure alarm.

LEDs show running state:

1. The three blue LED show fan speed high/medium/low.
2. The dichromatic LED shows heat and cool mode: The red LED shows heat mode, the green LED shows cool mode.
3. The red LED shows ON/OFF of the system.
4. The room sensor failure alarm: High speed LED blinks and shuts off all outputs.
   The water sensor failure alarm: Medium speed LED blinks and shuts off all outputs.
5. Mode conflict: The mode LED blinks and shuts off all outputs.

Notes:

1. Mode conflict: For 2-pipe model, when the system works on heat mode and the water temperature is blow 25°C, or when the system works on cool mode and the water temperature is above 25°C, the system considers it fault as the mode conflict. At the same time, the system will shut off all outputs and the mode LED will blink.
2. For 4-pipe model, the water sensor is fixed on the pipe of hot water.

General Characteristics

The **AC2800** controller can be connected straight to Fan Coil Network, without any further components; in fact the electronic board has integrated the NIM Module [Network Interface Module].
The Network allows to control from a unique place all the operating parameters of the connected units.
The general control is executed through the Master unit and can be carried out through the electronic controller on board, the wall mounted installed thermostat or the infra-red handset.

Across AC2800, the units can be connected straight to Smart Manager, the McQuay hydronic systems supervision solution. With reference to hydronic units, Smart Manger manages up to 50 mini-chillers and 120 fan coils.

General Characteristics

AC8000 Electronic Thermostat

The thermostat AC8000 is predisposed for wall mounted and is composed of:
- LCD DISPLAY: back-light and with graphic extremely easy, allows also an easy reading of the operating parameters and auto-diagnosis.
- KEYBOARD: allows to set parameters as: room temperature, fan speed, manual or automatic fan speed setting, operating mode summer/winter, ON/OFF, operating time setting.
- INFRARED HANDSET AC5300: standard, assures a utilization more easy than other thermostat 2.5 meters.

AC512 Mechanical Thermostat [for 2 pipes versions] and **Mechanical Thermostat AC513** [for 4 pipe versions]

Easy utilization, allows to set essential operating parameter: room temperature, fan speed, ON/OFF

Accessirues

Valves kit [standard condensate drain panel], 2 or 3 ways
Electrical heater (optional)
Controllers (optional)
Feet (cover and/or support)
Base module
Frontal air intake module
External air intake module

Technical Data

2 PIPES								3 ROWS	
Models		012C	020C	025C	035C	050C	060C	080C	090C
Nominal Air Flow (High/Medium/Low)	m³/h	290/245/197	380/296/210	497/349/260	705/565/400	853/695/465	1141/969/705	1360/1063/824	1500/1368/1190
Available Static Pressure	Pa	--	--	--	--	--	--	--	--
Total Cooling Capacity[1]	kW	1.3	1.8	2.7	3.6	4.8	5.9	6.9	8.0
Total Sensible Capacity[1]	kW	1.0	1.5	1.9	2.6	3.6	4.6	5.3	5.8
Heating Capacity[2]	kW	2.2	2.7	3.6	4.8	6.2	8.1	10.5	12.0
Water Flow Rate	l/s	0.063	0.085	0.129	0.170	0.227	0.282	0.358	0.347
Water Pressure Drop - Cooling	kPa	4	5	10	16	28	33	18	20
Lp (Sound Pressure Level)[3]	dB(A)	38/35/33	42/37/32	42/35/32	48/44/39	47/39/31	53/48/41	51/47/40	53/51/47
Power Supply	V/ph/Hz	220~240/1/50							
Fan N°.	n°	1	1	2	2	2	2	3	3
Max Power Supply[4]	kW	0.024	0.044	0.044	0.059	0.068	0.102	0.147	0.167
Cond. Drain Connections	mm	20	20	20	20	20	20	20	20
Water Connections	inches	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Total Volume	litres	0.792		1.158		1.525		1.89	
Weight [with Package]	kg	20 [22]		24 [27]		26 [30]		35 [39]	
Weight with Cabinet [with Package]	kg	22 [25]		29 [32]		32 [37]		45 [50]	
Dimens. unit (L x A x P)	mm	704x224x540		904x224x540		1104x224x540		1304x224x540	
Dimens. with Cabinet (L x A x P)	mm	910x539x230		1110x539x230		1310x539x230		1510x539x230	

2 PIPES								4 ROWS	
Models		412C	420C	425C	435C	450C	460C	480C	490C
Nominal Air Flow (High/Medium/Low)	m³/h	254/215/176	369/321/240	445/330/250	677/545/380	811/663/456	1068/915/672	1300/1165/908	1450/1288/1120
Available Static Pressure	Pa	--	--	--	--	--	--	--	--
Total Cooling Capacity[1]	kW	1.5	2.7	3.1	4.6	5.3	6.4	7.1	8.3
Total Sensible Capacity[1]	kW	1.1	1.7	2.1	2.8	3.7	5.0	5.5	5.8
Heating Capacity[2]	kW	2.3	2.8	4.2	5.3	6.8	8.4	11.0	12.5
Water Flow Rate	l/s	0.073	0.098	0.149	0.193	0.251	0.304	0.397	0.409
Water Pressure Drop - Cooling	kPa	4	5	10	14	21	20	18	17
Lp (Sound Pressure Level)[3]	dB(A)	38/36/33	42/37/32	41/34/32	47/43/38	47/39/31	53/48/41	51/47/40	53/50/47
Power Supply	V/ph/Hz	220~240/1/50							
Fan N°.	n°	1	1	2	2	2	2	3	3
Max Power Supply[4]	kW	0.021	0.050	0.051	0.056	0.077	0.107	0.143	0.167
Cond. Drain Connections	mm	20	20	20	20	20	20	20	20
Water Connections	inches	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Total Volume	litres	1.056		1.545		2.033		2.52	
Weight [with Package]	kg	24 [26]		28 [30]		30 [33]		35 [39]	
Weight with Cabinet [with Package]	kg	26 [27]		31 [35]		35 [40]		45 [50]	
Dimens. unit (L x A x P)	mm	704x224x540		904x224x540		1104x224x540		1304x224x540	
Dimens. with Cabinet (L x A x P)	mm	910x539x230		1110x539x230		1310x539x230		1510x539x230	

Notes:

1. At the following nominal conditions: nominal air flow; 7/12°C inlet/outlet water temperature; 27°C db/19°C wb inlet air temperature; High speed
2. At the following nominal conditions: nominal air flow 50°C inlet water temperature; 20°C inlet air temperature; Same water flow as for cooling; High speed
3. At High/Medium/Low speed; Nominal air flow; Measured in a room of 100m volume and 0.5 sec. reverberation time (e.g. office/conference room with carpet on the floor)
4. Nominal air flow; High fan speed

Technical Data

4 PIPES		012H	020H	025H	035H	050H	060H	080H	3+1 ROWS 090H
Models		012H	020H	025H	035H	050H	060H	080H	090H
Nominal Air Flow (High/Medium/Low)	m³/h	254/215/176	369/321/240	445/330/250	677/545/380	811/663/456	1068/915/672	1300/1063/824	1450/1248/1078
Available Static Pressure	Pa	--	--	--	--	--	--	--	--
Total Cooling Capacity[5]	kW	1.2	1.8	2.5	3.5	4.6	5.7	6.9	8.0
Total Sensible Capacity[5]	kW	0.9	1.4	1.7	2.5	3.4	4.4	4.9	5.2
Water Flow Rate	l/s	0.057	0.084	0.118	0.165	0.219	0.271	0.32	0.345
Water Pressure Drop - Cooling	kPa	4	5	8	15	26	16	15	17
Heating Capacity[6]	kW	2.3	2.9	4.3	5.6	7.0	8.6	12.0	13.0
Water Flow Rate	l/s	0.057	0.071	0.104	0.137	0.172	0.209	0.216	0.339
Water Pressure Drop - Heating	kPa	11	18	30	18	35	40	24	14
Lp (Sound Pressure Level)[7]	dB(A)								
Power Supply	V/ph/Hz				220~240/1/50				
Fan N°.	n°	1	1	2	2	2	2	3	3
Max Power Supply[4]	kW	0.021	0.050	0.051	0.056	0.077	0.107	0.140	0.161
Cond. Drain Connections	mm	20	20	20	20	20	20	20	20
Water Connections	inches	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Total Volume	litres	[0.792 + 0.264]		[1.158 + 0.386]		[1.525 + 0.508]		[1.89 + 0.63]	
Weight [with Package]	kg	24 [26]		28 [30]		30 [33]		35 [39]	
Weight with Cabinet [with Package]	kg	26 [27]		31 [35]		35 [40]		45 [50]	
Dimens. unit (L x A x P)	mm	704x224x540		904x224x540		1104x224x540		1304x224x540	
Dimens. with Cabinet (L x A x P)	mm	910x539x230		1110x539x230		1310x539x230		1510x539x230	

Notes:
1. Nominal air flow; High fan speed
2. At the following nominal conditions: nominal air flow; 7/12°C inlet/outlet water temperature; 27°C db/19°C wb inlet air temperature; High speed
3. At the following nominal conditions: nominal air flow; 70/60 °C inlet/outlet water temperature; 20°C inlet air temperature; High speed
4. At High/Medium/Low speed; nominal air flow; measured in a room of 100 m volume and 0.5 sec. reverberation time (e.g. office/conference room with carpet on the floor)

Sound Level

2 PIPES												3 ROWS
Model	Speed	1/1 Octave Sound Pressure Level								Lw {dB(A)}	Lp {dB(A)}	NR
		63Hz	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz			
012C	High	50.7	50.7	49.2	44.3	39.6	34.7	27.6	23.8	46.0	38.0	33.0
	Medium	48.9	48.9	46.7	41.7	36.6	30.2	23.6	22.5	43.5	35.5	30.0
	Low	47.1	47.1	44.4	39.1	32.8	25.8	20.5	22.4	40.5	32.5	28.0
020C	High	51.3	51.3	51.7	48.6	44.4	38.6	30.8	25.8	50.0	42.0	37.0
	Medium	48.0	48.0	47.1	43.8	38.0	30.2	22.8	23.8	44.5	36.5	32.0
	Lo w	45.3	45.3	43.3	39.0	32.2	24.0	19.3	22.8	40.0	32.0	28.0
025C	High	51.4	51.4	52.0	48.1	44.4	38.6	31.5	26.0	50.0	42.0	37.0
	Medium	46.9	46.9	46.1	42.4	36.9	29.2	21.8	22.7	43.0	35.0	31.0
	Low	45.4	45.4	43.6	39.1	32.6	24.5	19.2	22.6	40.0	32.0	28.0
035C	High	57.1	57.1	57.3	53.3	50.2	45.8	39.4	33.0	55.5	47.5	43.0
	Medium	53.2	53.2	53.7	50.0	46.2	41.2	33.8	27.8	51.5	43.5	39.0
	Low	48.9	48.9	49.2	45.6	40.7	34.4	26.0	23.6	47.0	38.5	34.0
050C	High	54.7	54.7	55.6	53.2	50.8	45.0	34.0	26.4	23.8	47.0	39.0
	Medium	48.7	48.7	48.1	45.9	41.4	34.0	26.4	23.8	47.0	39.0	35.0
	Low	47.8	47.8	41.6	37.5	30.1	21.7	19.5	23.1	39.0	31.0	26.0
060C	High	60.4	60.4	60.5	58.2	57.1	52.2	47.2	40.5	61.0	53.0	51.0
	Medium	56.1	56.1	55.4	53.3	51.8	46.4	40.7	33.7	56.0	48.0	44.0
	Low	53.2	53.2	49.5	47.6	44.6	38.1	31.8	26.8	49.0	41.5	38.0
080C	High	17.6	27.8	41.9	44.7	46.3	45.6	39.5	33.6	43.3	51.3	47.0
	Medium	15.9	24.6	38.3	41.4	42.6	41.2	34.4	27.7	39.4	47.4	42.0
	Low	13.6	19.5	32.8	35.4	35.8	33.2	25.2	18.2	32.7	40.7	37.0
090C	High	17.6	29.5	43.9	46.3	48.2	47.6	41.6	36.6	45.2	53.2	48.0
	Medium	16.2	27.2	41.1	44.1	45.7	44.9	38.4	33.1	42.6	50.6	46.0
	Low	16.0	24.3	38.1	41.2	42.2	40.7	33.9	28.0	39.1	47.1	42.0

2 PIPES												4 ROWS
Model	Speed	1/1 Octave Sound Pressure Level								Lw{dB(A)}	Lp{dB(A)}	NR
		63Hz	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz			
412C	High	50.3	50.3	48.8	43.9	39.2	34.3	27.2	23.4	46.0	38.0	33.0
	Medium	48.9	48.9	46.7	41.7	36.6	30.2	23.6	22.5	43.5	35.5	30.0
	Low	46.9	46.9	44.2	38.9	32.6	25.6	20.3	22.2	40.5	32.5	27.0
420C	High	51.5	51.5	51.9	48.8	44.6	38.8	31.0	26.0	50.0	42.0	38.0
	Medium	48.7	48.7	47.8	44.5	38.7	30.9	23.5	24.5	45.0	37.0	33.0
	Low	45.7	45.7	43.7	39.4	32.6	24.4	19.7	23.2	40.5	37.0	33.0
425C	High	50.7	50.7	.51.1	48.0	43.8	38.0	30.2	25.2	49.0	41.0	37.0
	Medium	46.2	46.2	45.3	42.0	36.2	28.4	21.0	22.0	43.0	34.5	31.0
	Low	45.0	45.0	43.0	38.7	31.9	23.7	19.0	22.5	39.5	31.5	27.0
435C	High	56.5	56.5	57.3	52.8	49.5	44.8	38.4	32.1	55.0	47.0	42.0
	Medium	52.9	52.9	53.7	49.5	45.5	40.2	33.0	27.3	51.5	43.0	38.0
	Low	48.7	48.7	49.0	45.2	40.2	33.6	25.7	24.1	46.0	38.0	34.0
450C	High	54.7	54.7	55.6	53.2	50.8	45.0	38.7	31.2	55.5	47.0	43.0
	Medium	48.7	48.7	48.1	45.9	41.4	34.0	26.4	23.8	47.0	39.0	35.0
	Low	48.1	48.1	41.9	37.8	30.4	22.0	19.8	23.4	39.0	31.0	26.0
460C	High	60.4	60.4	60.5	58.2	57.1	52.2	47.2	40.5	61.0	53.0	51.0
	Medium	56.1	56.1	55.4	53.3	51.8	46.4	40.7	33.7	56.0	48.0	44.0
	Low	53.2	53.2	49.5	47.6	44.6	38.1	31.8	26.8	49.0	41.5	38.0
480C	High	19.2	27.6	41.6	44.8	46.2	45.1	39.0	33.9	43.1	51.1	46.0
	Medium	18.6	24.5	37.9	41.7	42.2	40.7	34.1	28.3	39.2	47.2	42.0
	Low	14.8	19.6	32.3	35.6	35.6	32.9	25.3	18.9	32.6	40.6	36.0
490C	High	19.6	28.8	43.4	45.7	47.7	46.8	40.8	35.4	44.6	52.6	47.0
	Medium	18.9	26.9	40.7	43.6	45.3	44.1	37.8	31.8	42.1	50.1	45.0
	Low	16.8	24.5	37.7	40.9	41.9	40.3	33.5	27.1	38.8	46.8	42.0

Sound Level

|		1/1 Octave Sound Pressure Level										
4 PIPES												**3+1 ROWS**
Model	Speed	63Hz	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz	Lw{dB(A)}	Lp{dB(A)}	NR
412C	High	50.3	50.3	48.8	43.9	39.2	34.3	27.2	23.4	46.0	38.0	33.0
	Medium	48.9	48.9	46.7	41.7	36.6	30.2	23.6	22.5	43.5	35.5	30.0
	Low	46.9	46.9	44.2	38.9	32.6	25.6	20.3	22.2	40.5	32.5	27.0
420C	High	51.5	51.5	51.9	48.8	44.6	38.8	31.0	26.0	50.0	42.0	38.0
	Medium	48.7	48.7	47.8	44.5	38.7	30.9	23.5	24.5	45.0	37.0	33.0
	Low	45.7	45.7	43.7	39.4	32.6	24.4	19.7	23.2	40.5	37.0	33.0
425C	High	50.7	50.7	.51.1	48.0	43.8	38.0	30.2	25.2	49.0	41.0	37.0
	Medium	46.2	46.2	45.3	42.0	36.2	28.4	21.0	22.0	43.0	34.5	31.0
	Low	45.0	45.0	43.0	38.7	31.9	23.7	19.0	22.5	39.5	31.5	27.0
435C	High	56.5	56.5	57.3	52.8	49.5	44.8	38.4	32.1	55.0	47.0	42.0
	Medium	52.9	52.9	53.7	49.5	45.5	40.2	33.0	27.3	51.5	43.0	38.0
	Low	48.7	48.7	49.0	45.2	40.2	33.6	25.7	24.1	46.0	38.0	34.0
450C	High	54.7	54.7	55.6	53.2	50.8	45.0	38.7	31.2	55.5	47.0	43.0
	Medium	48.7	48.7	48.1	45.9	41.4	34.0	26.4	23.8	47.0	39.0	35.0
	Low	48.1	48.1	41.9	37.8	30.4	22.0	19.8	23.4	39.0	31.0	26.0
460C	High	60.4	60.4	60.5	58.2	57.1	52.2	47.2	40.5	61.0	53.0	51.0
	Medium	56.1	56.1	55.4	53.3	51.8	46.4	40.7	33.7	56.0	48.0	44.0
	Low	53.2	53.2	49.5	47.6	44.6	38.1	31.8	26.8	49.0	41.5	38.0
480C	High	19.2	27.6	41.6	44.8	46.2	45.1	39.0	33.9	43.1	51.1	46.0
	Medium	18.6	24.5	37.9	41.7	42.2	40.7	34.1	28.3	39.2	47.2	42.0
	Low	14.8	19.6	32.3	35.6	35.6	32.9	25.3	18.9	32.6	40.6	36.0
490C	High	19.6	28.8	43.4	45.7	47.7	46.8	40.8	35.4	44.6	52.6	47.0
	Medium	18.9	26.9	40.7	43.6	45.3	44.1	37.8	31.8	42.1	50.1	45.0
	Low	16.8	24.5	37.7	40.9	41.9	40.3	33.5	27.1	38.8	46.8	42.0

Sound pressure level and NR are measured to a room of 100m³ volume and 0.5 sec. reverberation time (e.g. office/conference room with carpet on the floor).

Operating Limits and Pressure Drops

| OPERATING LIMITS	MFU/MFC
Water circuit Maximum water-side pressure Minimum entering water temperature Maximum entering water temperature	16.4 kg/cm2 3°C (cooling) 80°C (heating)
Room air Minimum temperature Maximum temperature	16°C (10°C opational for MFU) 30°C
Power supply Nominal single-phase voltage Wire size	220~240 V/50 Hz AWG18 (or 1mm²)

Pressyre Drops
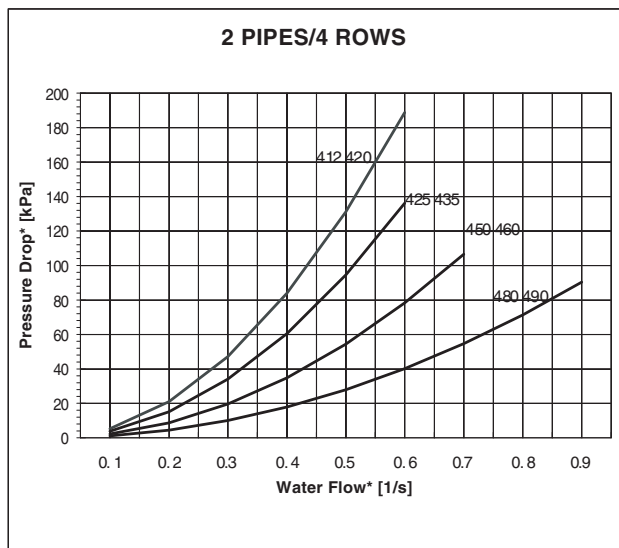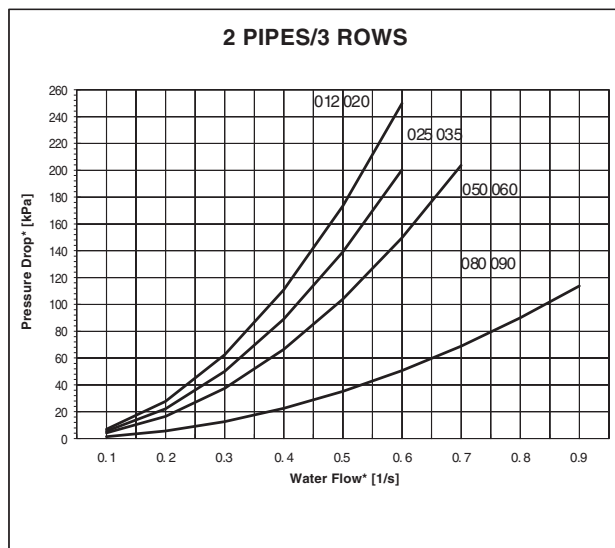
*The pressure drop is for coil only and excludes water connections and valves.

Outlines and Dimensions

MFC – C/H	012/020 412/420	025/035 425/435	050/060 450/460	080/090 480/490
A	598	798	998	1198
B	568	768	968	1168
C	526	726	926	1126
D	407	607	807	1007
E	704	904	1104	1304
F	529	729	929	1129
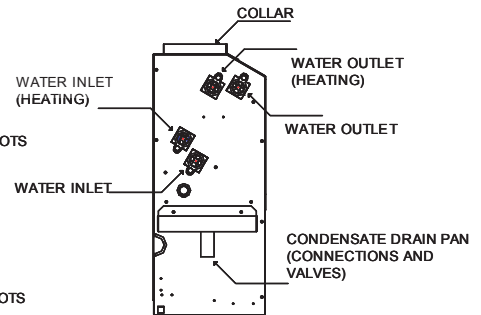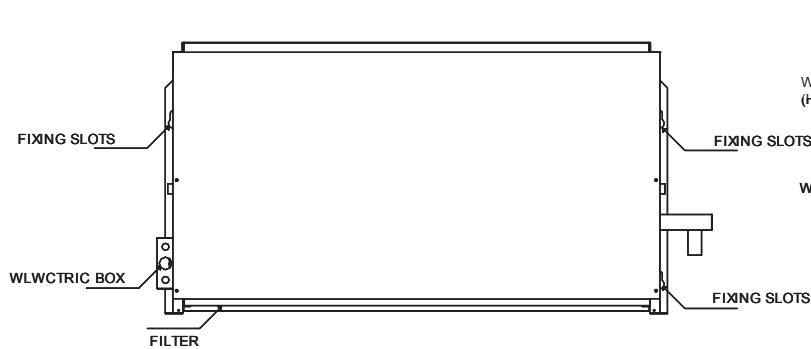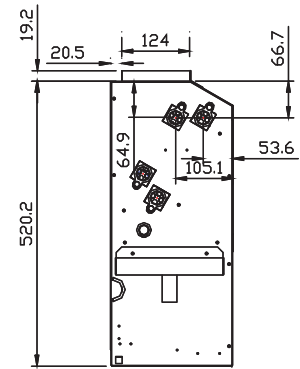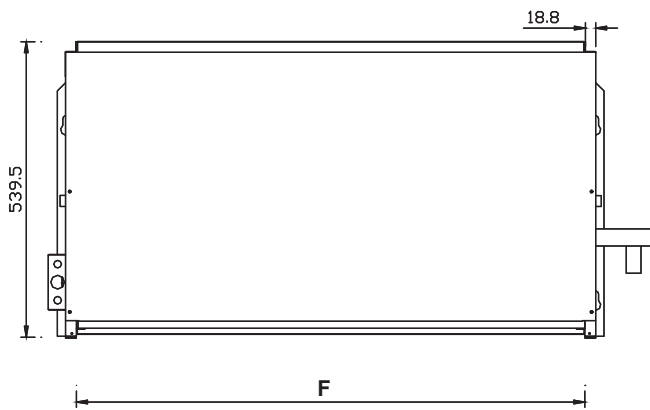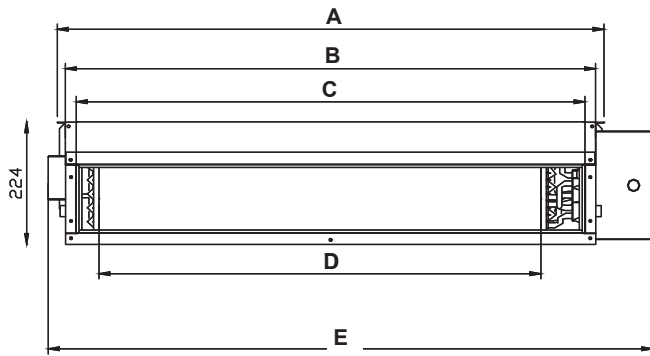
Outlines and Dimensions

MFU – C/H	012/020 412/420	025/035 425/435	050/060 450/460	080/090 480/490
A	910	1110	1310	1510
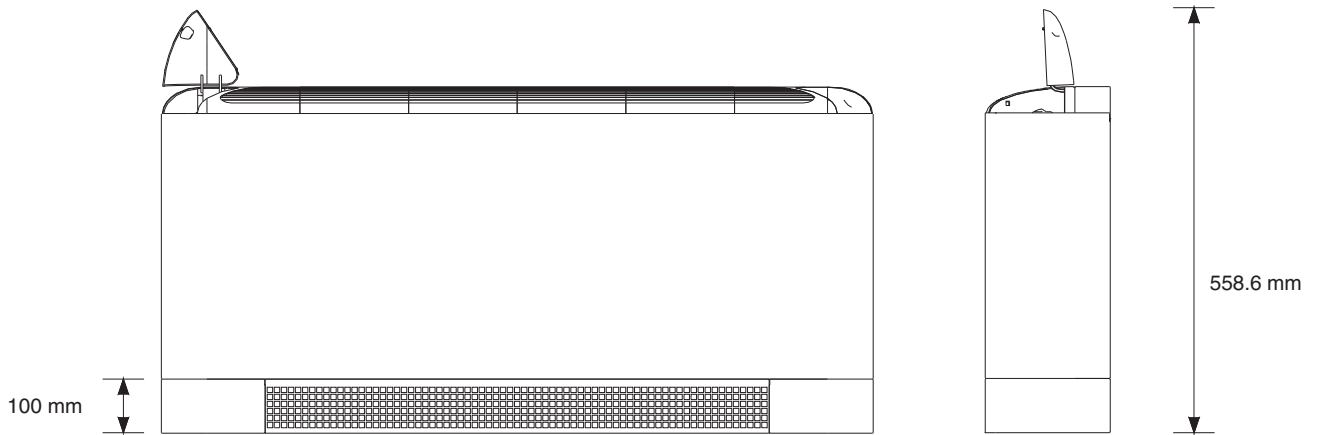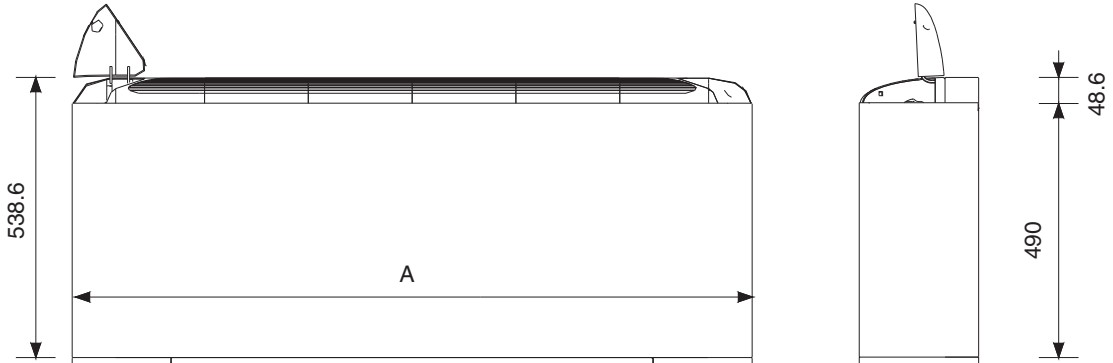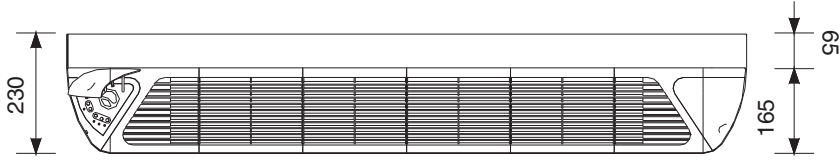
Height = 100 mm from the wall for:
- Feet (cover and/or support)
- Base module
- Frontal air intake module
- External air intake module

Installation

Installation of MFU/MFC Unit

- **Portage**
1. When unpacking, Units can not be taken out, instead to pull out the carton box upwards; Please do not lay the unit down or turn the unit up and down; Do not handle the unit through the cabinet, which will cause the damage of cabinet;

2. When moving the unit , please to handle it through the cross beam; Do not try to move the unit through the cabinet , which will cause the damage of cabinet;

3. After the unit is moved in position for installation, start to install the aesthetic feet, support (refer to the accessory installation instruction) ;

- **Accessory list of MFU/MFC series**

Accessory Box	MFU-AC-FT-O	MFU-AC-FT-S		MFU-AC-GR	
Installation Method	Aesthetic Feet L/R	Support	M4 Selftappping Screw	Inlet Grille	M5 finepitch Screw
MFU	Type A	1 SET(L/R)	2 EA	12 EA	1 EA	2 EA
	Type B	1 SET(L/R)	2 EA	12 EA	----	----
MFC	----	----	2 EA	4 EA	----	----

- **Accessory installation of MFU/MFC unit**
1. Before installation, lay down the unit with cabinet upwards;
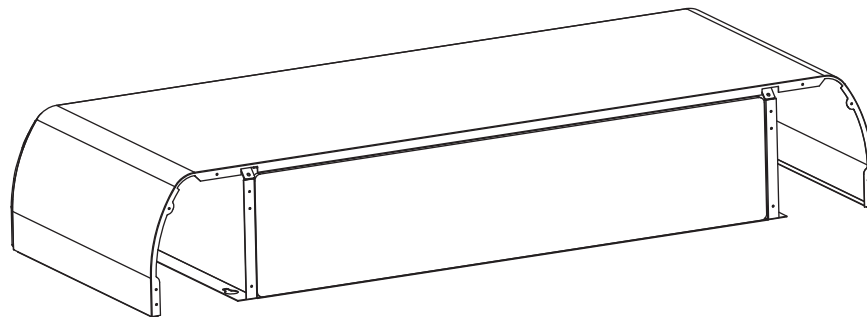
2. Step one: Install the SUPPORT;

Installation

Front panel

Side panel
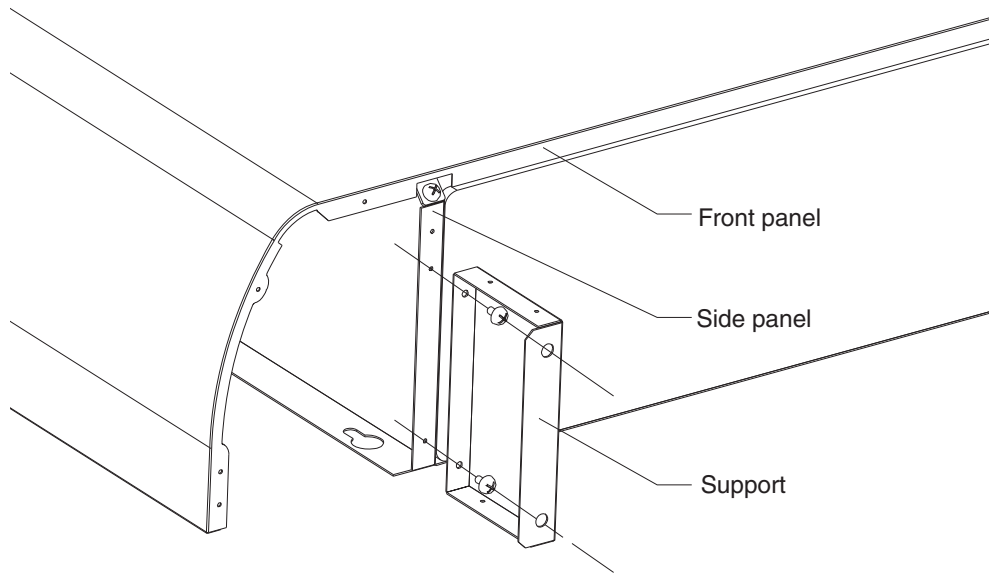
Support

As shown as the above drawings, to drill the screw to fix the support with core units;

3. Step two: To install the AESTHETIC FEET (L/R);

MFU unit

Aesthetic feet R

Support

MFU unit

Aesthetic feet R
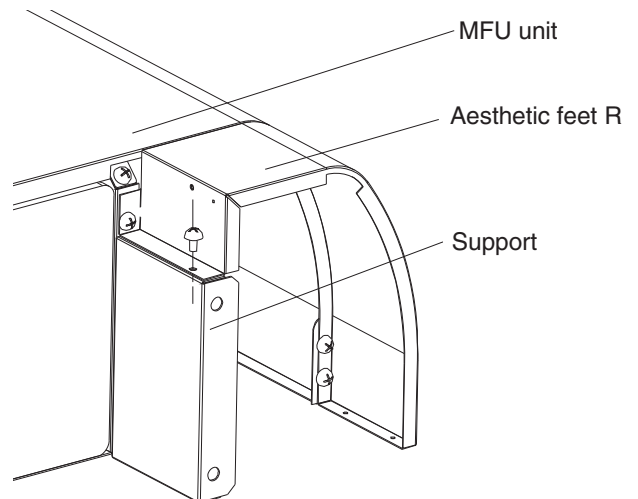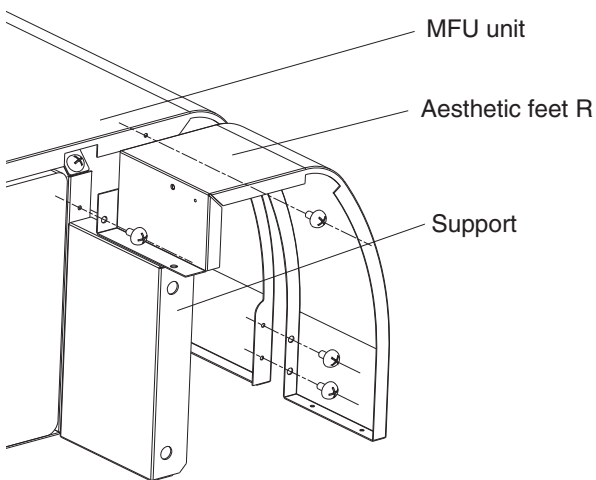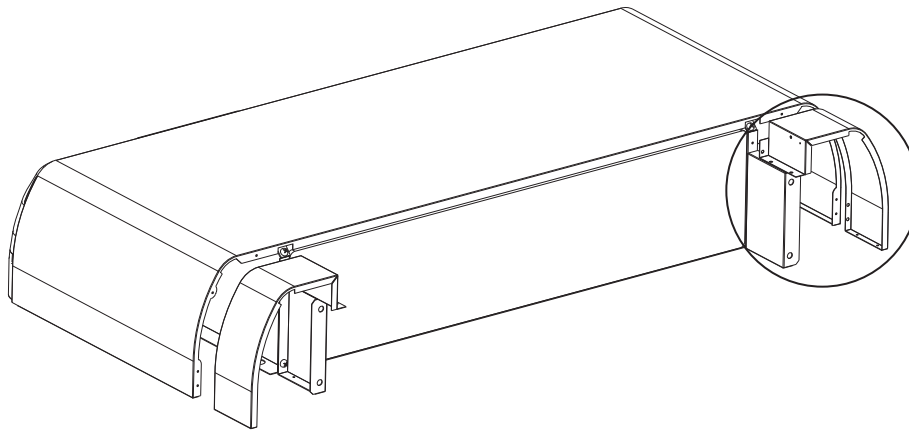
Support

Installation

As shown as above, to connect the aesthetic feet and support as above; (Left and right are the same way);
4. Step 3 : to install the GRILLE (only applied for type A);

To adjust this screw, do not
drill the screw too tight;
which shall be fit for slot in
of grille (fine-pitch screw)

MFU unit

Aesthetic feet R

Support

Front

Back

Adjust screw

Support   Aesthetic feet R   Inlet grille
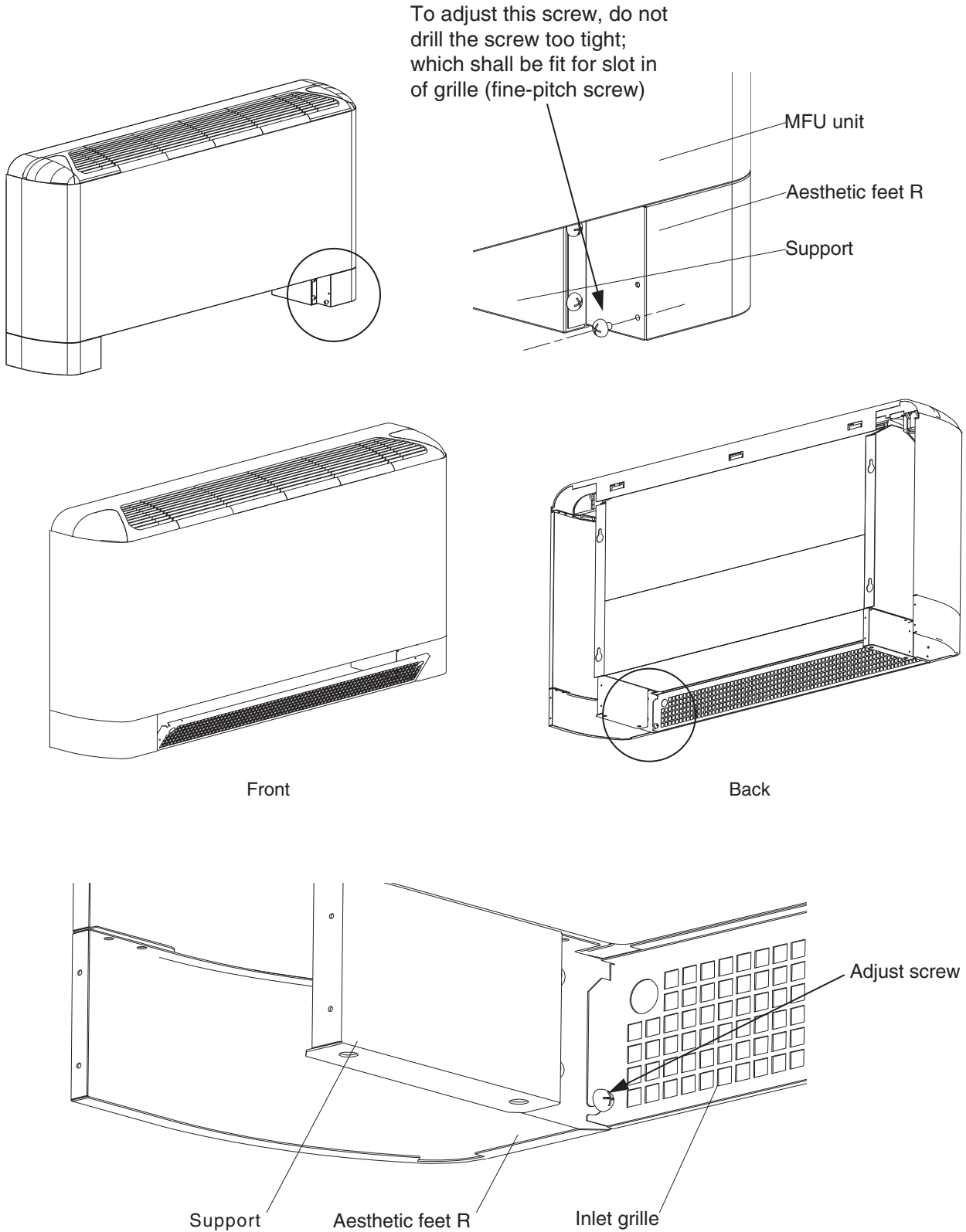
To fix the grille please slot the grille into the fixing screw (shown as the above view) , to adjust the tightness of screw and ensure the rotate of grille fixed with screw;

Installation

Preliminary Site Survey

- A place protected from rain, direct sunlight and well-ventilated wherever practicable.
- A place capable of bearing the weight of the outdoor unit and isolating noise and vibration.
- A place where there are no obstruction of air flow into or out the unit.
- Do not put any object which may become obstacle for the air flow into or out the unit.
- The location must not be susceptible to high concentration dust, oil, salt or sulfide gas.

MFC Series
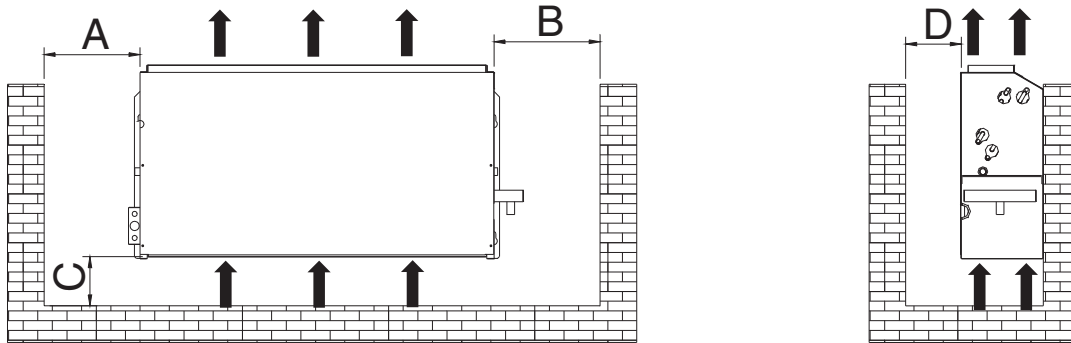
ALL UNITS	A	B	C	D
Min. Distance (mm)	500	500	100	500

MFU Series
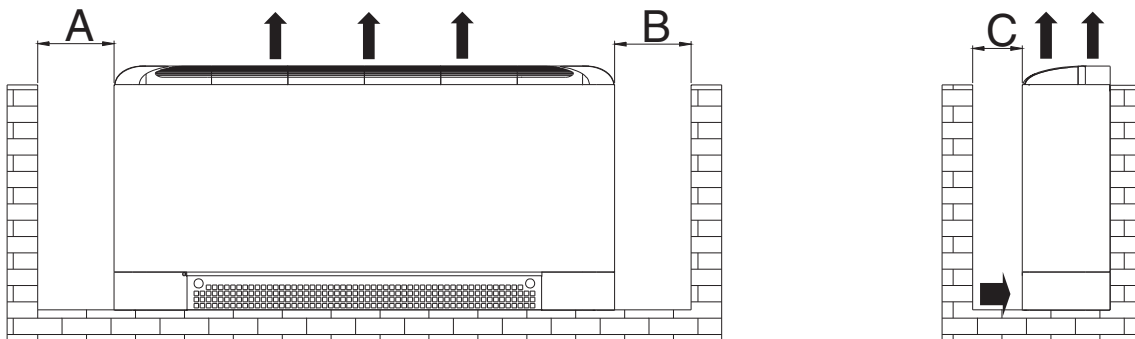
ALL UNITS	A	B	C
Min. Distance (mm)	300	300	500

Control Features

Electronic Controller AC2800B

Location	On board
Models	Standard for MFU series, all versions
Parameters	Temperature operation range:
	16-30°C
Main Functions	On/Off
	Cool/Heat Mode
	Fan speed (HIGH/MEDIUM/LOW)
	Cold draft protection (Heat Mode)
	Sensor failure alarm (auto-diagnosis)
	2 or 3 ways valve with ON/OFF control
Integration into FCU Network	---
Integration with Smart Manager	---

1. Potentiometer for temperature regulation
2. On/Off keys
3. On/Off LED
4. Heating/Cooling mode keys
5. Heating/Cooling mode LED
6. Fan Speed selection keys
7. Fan Speed LED (HIGH)
8. Fan Speed LED (MEDIUM)
9. Fan Speed LED (LOW)
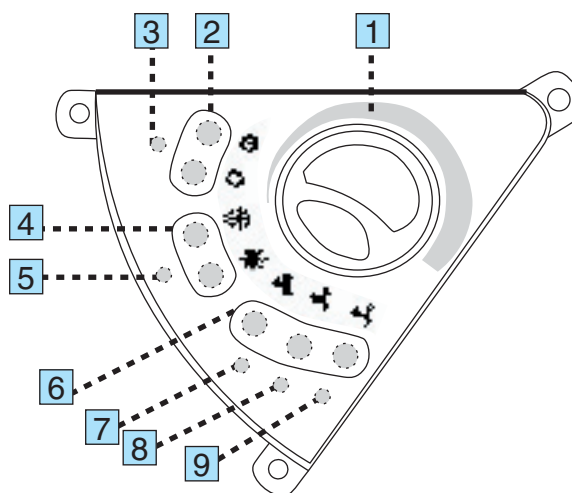
Electronic Controller AC2800 (Optional)

Location	On board
Models	MFU series, all versions
Parameters	Selectable temperature operation range:
	10-30°C or 16-30°C
Main Functions	On/Off
	Cool/Heat mode
	Fan speed (HIGH/MEDIUM/LOW)
	Sensor failure alarm (auto-diagnosis)
	2 or 3 ways valve with ON/OFF control
Integration into FCU Network	Direct connection
Integration with Smart Manager	Direct connection

1. Potentiometer for temperature regulation
2. On/Off keys
3. On/Off LED
4. Heating/Cooling mode keys
5. Heating/Cooling mode LED
6. Fan Speed selection keys
7. Fan Speed LED (HIGH)
8. Fan Speed LED (MEDIUM)
9. Fan Speed LED (LOW)
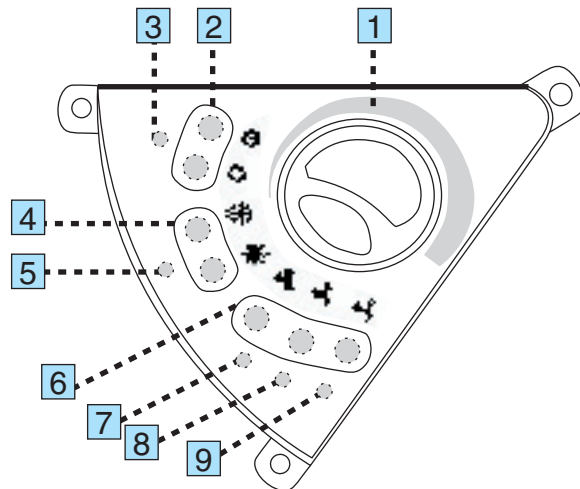
Auto-diagnosis

LED Blinking 7: Ambient temperature sensor incorrect operation.
LED Blinking 8: Water temperature sensor incorrect operation.
LED Blinking 5: Fan Coil/Chiller conflicting mode selection (when the system works on cool mode and the water temperature is above 25°C, or when the system works on heat mode and the water temperature is blow 25°C, the system conside it as the mode conflict, at the same time, the system will shut off all outputs and the LED will blink.)

Electronic Thermostat AC8000 + Remote Controller AC5300

| Location	Wall mounted	
Models	All models; All versions	
Parameters	Temperature operation range: 16-30°C	
Main Functions	On/Off	
	Cool/Heat mode	
	Fan speed (HIGH/MEDIUM/LOW)	
	Auto Fan Speed selection [available from December 2004]	
	Date/Time setting	
	Sensor failure alarm (auto-diagnosis)	
	Timer with 2 daily setting (14 weekly)	
	Cold draft protection	
	2 or 3 ways valve with ON/OFF control	
	Remote control – max. distance: 2.5 meters	
Integration into FCU Network	Connection through AC8000C controller	
	Direct connection [available from December 2004]	
Integration with Smart Manager	Connection through AC8000C controller	
	Direct connection [available from December 2004]	

1. On/Off key
2. Heating/Cooling mode key
3. Clock/Timer setting
4. Fan speed selection key (HIGH/MEDIUM/LOW)
5. Temperature up key
6. Temperature down key
7. Back-light LCD display

a. On/Off key
b. Fan speed selection key (HIGH/MEDIUM/LOW)
c. Temperature up key
d. Temperature down key
e. Heating/Cooling mode key
f. Clock/Timer setting
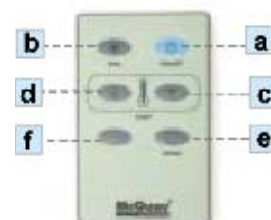
E00: Ambient temperature sensor open
E01: Ambient temperature sensor short

Mechanical Thermostat AC512/AC513

Location	Wall mounted
Models	All models
	AC512: 2 Pipes version
	AC513: 4 Pipes version
Parameters	Temperature operation range:
	10-30°C
Main Functions	On/Off
	2 or 3 ways valve with ON/OFF control
Integration into FCU Network	---
Integration with Smart Manager	---

1. Potentiometer for temperature regulation
2. Fan speed keys (HIGH/MEDIUM/LOW)
3. Heating/Cooling mode buttons

Wiring Diagrams

MFU – C0 – BCE	012/020/025/035/050/060/080/090
	412/420/425/435/450/460/480/490

NOTE
– – – – NIMBUS A/B,1/3/4: FIELD SUPPLY WIRING
VALVE: OPTIONAL

AC2800 JUMPERS SETTING:

J1	J2	J3	J4
OPEN	CLOSE	OPEN	CLOSE

MFU – H0 – BCE	012/020/025/035/050/060/080/090

NOTE
– – – – NIMBUS A/B,1/3/4/5: FIELD SUPPLY WIRING
VALVE: OPTIONAL

AC2800 JUMPERS SETTING:

J1	J2	J3	J4
CLOSE	CLOSE	OPEN	CLOSE
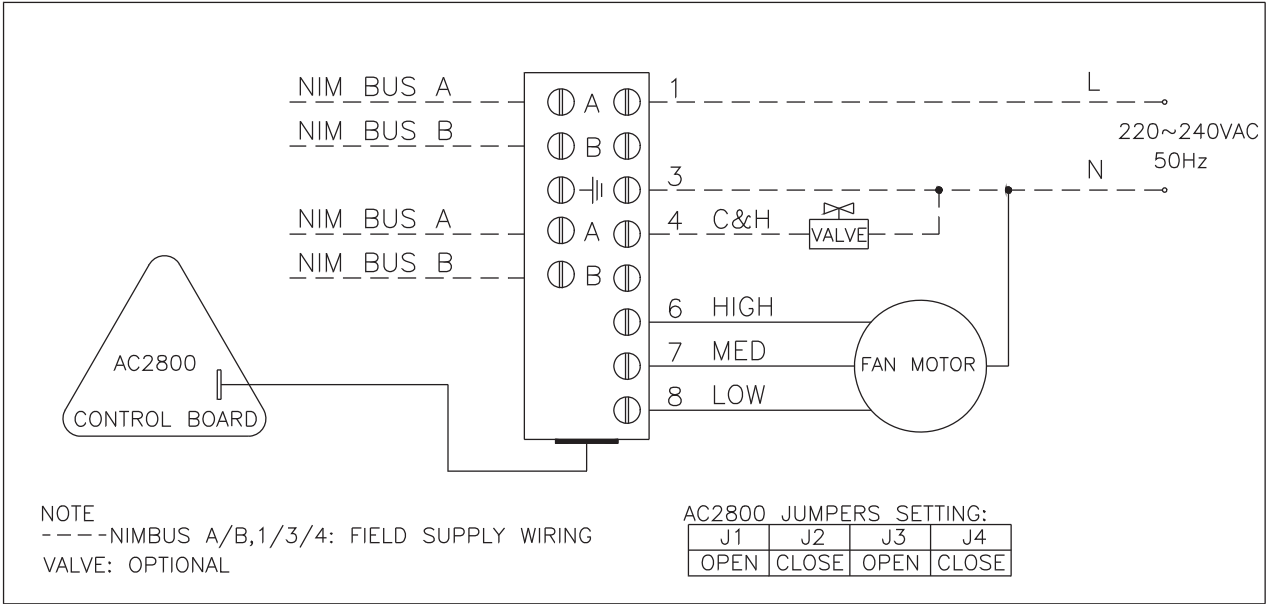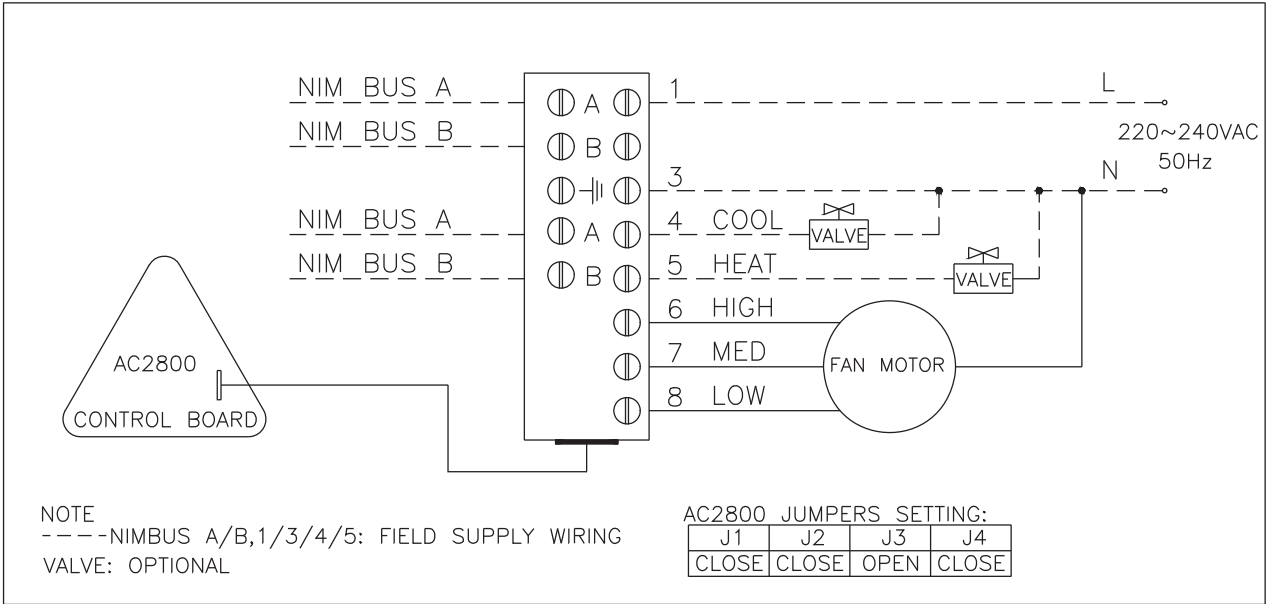
Wiring Diagrams

| MFU – C0 – BCM | 012/020/025/035/050/060/080/090 |
| | 412/420/425/435/450/460/480/490 |

NOTE
– – – –1/3/4: FIELD SUPPLY WIRING
VALVE: OPTIONAL

AC2800B JUMPERS SETTING:

J1	J2	J3
OPEN	CLOSE	OPEN

| MFU – H0 – BCM | 012/020/025/035/050/060/080/090 |

NOTE
– – – –1/3/4/5: FIELD SUPPLY WIRING
VALVE: OPTIONAL

AC2800B JUMPERS SETTING:

J1	J2	J3
CLOSE	CLOSE	OPEN

Technical Data At Conditions Non Standard

2 PIPES   **3 ROWS**

Water Temperature IN °C	Out °C	Air Temperature DB °C	WB °C	012 Total [kW]	012 Sens [kW]	020 Total [kW]	020 Sens [kW]	025 Total [kW]	025 Sens [kW]	035 Total [kW]	035 Sens [kW]	050 Total [kW]	050 Sens [kW]	060 Total [kW]	060 Sens [kW]	080 Total [kW]	080 Sens [kW]	090 Total [kW]	090 Sens [kW]
3	6	21	15	1.40	1.02	1.91	1.42	2.66	1.80	3.58	1.49	4.72	3.40	6.00	4.43	6.96	5.05	8.10	5.54
				1.22	0.89	1.57	1.15	1.96	1.33	3.00	2.08	4.01	2.87	5.33	3.89	6.18	4.43	7.20	4.86
				1.01	0.74	1.50	0.86	1.50	1.03	2.25	1.56	2.87	2.03	4.17	2.99	4.84	3.41	5.63	3.74
3	8	21	15	1.05	0.86	1.44	1.20	2.22	1.57	2.91	2.17	4.03	3.07	5.03	3.98	5.83	4.54	6.79	4.98
				0.93	0.75	1.22	0.99	1.66	1.19	2.47	1.83	3.47	2.61	4.52	3.51	5.24	4.00	6.10	4.39
				0.79	0.63	0.93	0.76	1.29	0.93	1.89	1.39	2.55	1.87	3.62	2.73	4.20	3.11	4.89	3.41
3	10	21	15	0.68	0.68	0.98	0.98	1.70	1.33	2.15	1.82	3.24	2.71	3.95	3.51	4.58	4.00	5.33	4.39
				0.61	0.61	0.82	0.82	1.30	1.02	1.87	1.55	2.84	2.32	3.62	3.11	4.20	3.55	4.89	3.89
				0.52	0.52	0.69	0.64	1.03	0.81	1.47	1.20	2.15	1.69	2.99	2.44	3.47	2.78	4.04	3.05
5	8	21	15	1.14	0.90	1.54	1.25	2.25	0.59	2.97	2.20	3.91	3.01	4.91	3.93	5.70	4.48	6.63	4.91
				0.99	0.78	1.28	1.02	1.65	1.18	2.50	1.84	3.34	2.55	4.39	3.45	5.09	3.93	5.93	4.31
				0.83	0.65	0.98	0.77	1.26	0.92	1.88	1.39	2.41	1.81	3.46	2.66	4.01	3.03	4.67	3.33
5	10	21	15	0.59	0.74	1.06	1.04	1.78	1.36	2.27	1.88	3.17	2.69	3.89	3.48	4.51	3.97	5.25	4.35
				0.69	0.65	0.92	0.86	1.33	1.03	1.95	1.59	2.76	2.29	3.54	3.08	4.11	3.51	4.78	3.85
				0.77	0.55	0.74	0.66	1.04	0.81	1.51	1.21	2.06	1.65	2.89	2.40	3.35	2.74	3.90	3.00
5	12	21	15	0.55	0.55	0.80	0.80	1.20	1.11	1.52	1.52	2.32	2.32	2.98	2.98	3.46	3.40	4.02	3.73
				0.49	0.49	0.68	0.68	0.93	0.86	1.30	1.30	2.07	1.99	2.65	2.65	3.07	3.02	3.58	3.31
				0.42	0.42	0.53	0.53	0.74	0.68	1.04	1.01	1.62	1.45	2.19	2.10	2.54	2.39	2.96	2.63
7	10	21	15	0.86	0.77	1.15	1.08	1.80	1.37	2.33	1.90	3.02	2.62	3.72	3.42	4.32	3.90	5.02	4.28
				0.75	0.68	0.97	0.88	1.32	1.02	1.96	1.59	2.61	2.22	3.36	3.00	3.90	3.42	4.54	3.75
				0.63	0.56	0.75	0.66	1.00	0.80	1.48	1.20	1.90	1.58	2.70	2.32	3.13	2.64	3.65	2.90
7	12	21	15	0.60	0.60	0.86	0.86	1.28	1.14	1.57	1.57	2.28	2.28	2.94	2.94	3.41	3.35	3.97	3.68
				0.53	0.52	0.71	0.71	0.96	0.87	1.36	1.33	1.98	1.95	2.61	2.61	3.03	2.98	3.52	3.26
				0.45	0.45	0.55	0.55	0.75	0.69	1.07	1.03	1.51	1.41	2.07	2.07	2.40	2.36	2.79	2.59
7	14	21	15	0.41	0.41	0.62	0.62	0.86	0.86	1.18	1.18	1.87	1.87	2.40	2.40	2.78	2.74	3.24	3.00
				0.37	0.37	0.52	0.52	0.67	0.67	1.02	1.02	1.61	1.61	2.15	2.15	2.49	2.45	2.90	2.69
				0.32	0.32	0.41	0.41	0.54	0.54	0.80	0.50	1.19	1.19	1.71	1.71	1.98	1.95	2.31	2.14
9	12	21	15	0.64	0.64	0.89	0.89	1.30	1.15	1.60	1.60	2.21	2.21	2.86	2.86	3.32	3.26	3.86	3.58
				0.56	0.56	0.73	0.73	0.95	0.86	1.36	1.34	1.87	1.87	2.52	2.52	2.92	2.87	3.40	3.15
				0.47	0.47	0.56	0.56	0.72	0.67	1.04	1.01	1.35	1.35	1.96	1.96	2.27	2.23	2.65	2.45
9	14	21	15	0.46	0.46	0.67	0.67	0.90	0.90	1.23	1.23	1.84	1.84	2.37	2.37	2.75	2.70	3.20	2.96
				0.41	0.41	0.56	0.56	0.69	0.69	1.05	1.05	1.57	1.57	2.10	2.10	2.44	2.39	2.84	2.63
				0.35	0.35	0.43	0.43	0.55	0.55	0.82	0.82	1.15	1.15	1.66	1.66	1.93	1.89	2.24	2.08
9	16	21	15	0.26	0.26	0.42	0.42	0.59	0.59	0.82	0.82	1.39	1.39	1.79	1.79	2.08	2.04	2.42	2.24
				0.24	0.24	0.36	0.36	0.47	0.47	0.72	0.72	1.21	1.21	1.61	1.61	1.87	1.84	2.17	2.01
				0.21	0.21	0.29	0.29	0.38	0.38	0.57	0.57	0.90	0.90	1.29	1.29	1.50	1.47	1.74	1.61
11	14	21	15	0.50	0.50	0.70	0.70	0.91	0.91	1.25	1.25	1.77	1.77	2.28	2.28	2.64	2.60	3.08	2.85
				0.44	0.44	0.58	0.58	0.69	0.69	1.06	1.06	1.50	1.50	2.02	2.02	2.34	2.30	2.73	2.53
				0.37	0.37	0.44	0.44	0.54	0.54	0.81	0.81	1.08	1.08	1.57	1.57	1.82	1.79	2.12	1.96
11	16	21	15	0.88	0.80	1.37	1.37	1.77	1.77	0.31	0.31	0.47	0.47	0.64	0.64	0.74	0.73	0.86	0.80
				0.76	0.76	1.18	1.18	1.58	1.58	0.28	0.28	0.40	0.40	0.50	0.50	0.58	0.57	0.68	0.63
				0.60	0.60	0.87	0.87	1.25	1.25	0.24	0.24	0.31	0.31	0.40	0.40	0.46	0.46	0.54	0.50
11	18	21	15	0.11	0.11	0.21	0.21	0.28	0.28	0.42	0.42	0.85	0.85	1.12	1.12	1.30	1.28	1.51	1.40
				0.10	0.10	0.19	0.19	0.23	0.23	0.37	0.37	0.75	0.75	1.02	1.02	1.18	1.16	1.38	1.28
				0.09	0.09	0.15	0.15	0.19	0.19	0.31	0.31	0.58	0.58	0.83	0.83	0.96	0.95	1.12	1.04
3	6	23	17	1.77	1.14	2.42	1.58	3.26	2.00	4.43	2.78	5.85	3.76	7.51	4.91	8.71	5.60	10.14	6.14
				1.54	0.99	1.98	1.29	2.39	1.48	3.70	2.32	4.96	3.17	6.63	4.30	7.69	4.90	8.95	5.38
				1.27	0.82	1.49	0.96	1.83	1.15	2.76	1.74	3.52	2.24	5.15	3.30	5.97	3.76	6.95	4.13
3	8	23	17	1.43	0.99	1.96	1.38	2.84	1.79	3.79	2.47	5.19	3.45	6.57	4.49	7.62	5.12	8.87	5.61
				1.26	0.86	1.64	1.13	2.11	1.34	3.20	2.08	4.44	2.92	5.86	3.95	6.80	4.50	7.91	4.94
				1.06	0.72	1.27	0.86	1.64	1.05	2.43	1.57	3.21	2.09	4.63	3.06	5.37	3.49	6.25	3.83
3	10	23	17	1.05	0.82	1.47	1.17	2.35	1.56	3.07	2.14	4.45	3.12	5.54	4.04	6.43	4.61	7.48	5.05
				0.94	0.73	1.27	0.97	1.78	1.19	2.64	1.82	3.85	2.66	5.01	3.57	5.81	4.07	6.76	4.46
				0.81	0.62	1.01	0.75	1.40	0.94	2.04	1.40	2.85	1.92	4.04	2.79	4.69	3.18	5.45	3.49
5	8	23	17	1.52	1.02	2.06	1.42	2.86	1.80	3.85	2.50	5.06	3.39	6.44	4.43	7.47	5.05	8.69	5.54
				1.32	0.89	1.70	1.16	2.09	1.33	3.22	2.09	4.30	2.86	5.71	3.88	6.62	4.42	7.71	4.85
				1.09	0.74	1.28	0.87	1.60	1.03	2.41	1.56	3.07	2.02	4.46	2.89	5.17	3.29	6.02	3.61
5	10	23	17	1.16	0.87	1.60	1.22	2.42	1.59	3.18	2.19	4.36	3.08	5.47	4.01	6.35	4.57	7.38	5.01
				1.03	0.77	1.35	1.01	1.80	1.20	2.70	1.85	3.76	2.62	4.91	3.53	5.70	4.02	6.63	4.41
				0.87	0.64	1.05	0.76	1.40	0.94	2.06	1.40	2.74	1.87	3.91	2.74	4.54	3.12	5.28	3.43
5	12	23	17	0.75	0.71	1.07	1.01	1.89	1.35	2.40	1.86	3.56	2.74	4.36	3.55	5.06	4.05	5.89	4.44
				0.68	0.63	0.95	0.84	1.44	1.03	2.08	1.58	3.12	2.34	3.99	3.15	4.63	3.59	5.39	3.94
				0.60	0.53	0.78	0.65	1.13	0.82	1.63	1.22	2.34	1.70	3.27	2.46	3.79	2.80	4.41	3.08
7	10	23	17	1.24	0.90	1.68	1.26	2.42	1.59	3.22	2.21	4.20	3.01	5.29	3.93	6.14	4.48	7.14	4.91
				1.08	0.79	1.39	1.03	1.77	1.18	2.70	1.85	3.59	2.54	4.72	3.45	5.48	3.93	6.37	4.31
				0.90	0.66	1.06	0.77	1.35	0.92	2.02	1.39	2.58	1.80	3.72	2.65	4.32	3.02	5.02	3.31
7	12	23	17	0.86	0.75	1.18	1.06	1.94	1.38	2.50	1.90	3.45	2.70	4.25	3.51	4.93	4.00	5.74	4.39
				0.77	0.66	1.02	0.87	1.45	1.04	2.13	1.60	3.00	2.30	3.86	3.09	4.48	3.52	5.21	3.86
				0.66	0.56	0.81	0.67	1.13	0.82	1.64	1.22	2.22	1.65	3.13	2.41	3.63	2.75	4.23	3.01
7	14	23	17	0.57	0.57	0.83	0.83	1.35	1.13	1.64	1.56	2.56	2.35	3.03	3.03	3.51	3.45	4.09	3.79
				0.51	0.51	0.70	0.70	1.04	0.87	1.45	1.33	2.29	2.01	2.84	2.70	3.29	3.08	3.83	3.38
				0.44	0.44	0.55	0.55	0.83	0.70	1.17	1.03	1.78	1.47	2.42	2.12	2.81	2.42	3.27	2.65
9	12	23	17	0.94	0.78	1.26	1.09	1.94	1.38	2.52	1.91	3.27	2.62	4.04	3.42	4.69	3.90	5.45	4.28
				0.82	0.68	1.06	0.89	1.42	1.03	2.12	1.60	2.81	2.22	3.64	3.01	4.22	3.43	4.91	3.76
				0.69	0.57	0.82	0.67	1.08	0.80	1.60	1.21	2.04	1.58	2.91	2.32	3.38	2.64	3.93	2.90
9	14	23	17	0.62	0.62	0.88	0.88	1.42	1.16	1.74	1.59	2.45	2.30	2.98	2.98	3.46	3.40	4.02	3.73
				0.55	0.55	0.73	0.73	1.06	0.88	1.51	1.35	2.17	1.96	2.70	2.64	3.13	3.01	3.65	3.30
				0.46	0.46	0.56	0.56	0.83	0.70	1.18	1.04	1.65	1.42	2.27	2.06	2.63	2.35	3.06	2.58
9	16	23	17	0.43	0.43	0.64	0.64	0.89	0.89	1.22	1.22	1.90	1.90	2.45	2.45	2.84	2.79	3.31	3.06
				0.39	0.39	0.54	0.54	0.69	0.69	1.05	1.05	1.64	1.64	2.19	2.19	2.54	2.50	2.96	2.74
				0.33	0.33	0.43	0.43	0.56	0.56	0.82	0.82	1.21	1.21	1.74	1.74	2.02	1.98	2.35	2.18
11	14	23	17	2.24	2.24	2.88	2.88	0.65	0.65	0.90	0.90	1.41	1.16	1.76	1.60	2.04	1.82	2.38	2.00
				1.96	1.88	2.54	2.54	0.57	0.57	0.74	0.74	1.03	0.87	1.49	1.35	1.73	1.54	2.01	1.69
				1.46	1.34	2.03	1.97	0.47	0.47	0.56	0.56	0.78	0.68	1.13	1.02	1.31	1.16	1.53	1.28
11	16	23	17	0.48	0.48	0.68	0.68	0.92	0.92	1.26	1.26	1.86	1.86	2.40	2.40	2.78	2.74	3.24	3.00
				0.42	0.42	0.57	0.57	0.71	0.71	1.08	1.08	1.59	1.59	2.13	2.13	2.47	2.43	2.88	2.66
				0.36	0.36	0.44	0.44	0.56	0.56	0.83	0.83	1.16	1.16	1.68	1.68	1.95	1.92	2.27	2.10
11	18	23	17	0.28	0.28	0.44	0.44	0.62	0.62	0.85	0.85	1.42	1.42	1.83	1.83	2.12	2.09	2.47	2.29
				0.25	0.25	0.38	0.38	0.49	0.49	0.74	0.74	1.23	1.213	1.65	1.65	1.91	1.88	2.23	2.06
				0.22	0.22	0.30	0.30	0.40	0.40	0.59	0.59	0.92	0.92	1.32	1.32	1.53	1.50	1.78	1.65

Technical Data At Conditions Non Standard

| 2 PIPES | | | | | | | | | | | | | | | | | | | | 3 ROWS |

Water Temp IN °C	Out °C	Air DB °C	WB °C	012 Total [kW]	012 Sens [kW]	020 Total [kW]	020 Sens [kW]	025 Total [kW]	025 Sens [kW]	035 Total [kW]	035 Sens [kW]	050 Total [kW]	050 Sens [kW]	060 Total [kW]	060 Sens [kW]	080 Total [kW]	080 Sens [kW]	090 Total [kW]	090 Sens [kW]
3	6	25	19	2.16	1.25	2.95	1.73	3.88	2.19	5.34	3.05	7.05	4.09	9.11	5.35	10.57	6.10	12.30	6.69
				1.87	1.09	2.41	1.41	2.85	1.62	4.45	2.54	5.95	3.44	8.01	4.68	9.29	5.34	10.81	5.85
				1.55	0.90	1.80	1.05	2.19	1.25	3.31	1.89	4.20	2.42	6.17	3.58	7.16	4.08	8.33	4.48
3	8	25	19	12.83	1.11	2.52	1.54	3.48	1.99	4.72	2.75	6.41	3.80	8.20	4.95	9.51	5.64	11.07	6.19
				1.60	0.97	2.09	1.26	2.59	1.49	3.97	2.31	5.45	3.21	7.27	4.35	8.43	4.96	9.81	5.44
				1.34	0.81	1.59	0.95	2.00	1.16	2.99	1.74	3.91	2.29	5.68	3.35	6.59	3.82	7.67	4.19
3	10	25	19	1.47	0.95	2.04	1.34	3.03	1.77	4.04	2.44	5.71	3.49	7.22	4.53	8.38	5.16	9.75	5.66
				1.30	0.84	1.73	1.11	2.28	1.34	3.43	2.07	4.90	2.97	6.46	3.99	7.49	4.55	8.72	4.99
				1.11	0.71	1.35	0.85	1.78	1.06	2.63	1.58	3.57	2.13	5.12	3.11	5.94	3.55	6.91	3.89
5	8	25	19	1.91	1.14	2.61	1.58	3.49	2.00	4.77	2.77	6.28	3.74	8.07	4.89	9.36	5.57	10.89	6.11
				1.66	0.99	2.14	1.28	2.56	1.48	3.98	2.31	5.30	3.15	7.11	4.28	8.25	4.88	9.60	5.35
				1.37	0.82	1.60	0.96	1.96	1.14	2.96	1.73	3.76	2.22	5.51	3.28	6.39	3.74	7.44	4.10
5	10	25	19	1.58	1.00	2.16	1.39	3.08	1.80	4.13	2.48	5.61	3.45	7.13	4.49	8.27	5.12	9.63	5.61
				1.38	0.87	1.80	1.14	2.29	1.35	3.48	2.09	4.79	2.92	6.34	3.95	7.35	4.50	8.56	4.94
				1.16	0.73	1.38	0.86	1.77	1.05	2.63	1.58	3.45	2.08	4.99	3.05	5.79	3.48	6.74	3.81
5	12	25	19	1.19	0.84	1.66	1.19	2.59	1.58	3.40	2.17	4.86	3.13	6.08	4.06	7.05	4.63	8.21	5.08
				1.06	0.74	1.42	0.99	1.95	1.20	2.90	1.84	4.20	2.67	5.48	3.59	6.36	4.09	7.40	4.49
				0.91	0.63	1.13	0.73	1.53	0.65	2.24	1.41	3.09	1.92	4.39	2.80	5.09	3.19	5.93	3.50
7	10	25	19	1.64	1.03	2.24	1.42	3.07	1.80	4.15	2.49	5.44	3.38	6.94	4.41	8.05	5.03	9.37	5.51
				1.43	0.78	1.84	1.16	2.25	1.33	3.47	2.03	4.61	2.84	6.15	3.87	7.13	4.41	8.30	4.84
				1.18	0.74	1.39	0.86	1.72	1.03	2.59	1.56	3.28	2.01	4.79	2.96	5.56	3.37	6.47	3.70
7	12	25	19	1.29	0.88	1.77	1.23	2.63	1.59	3.47	2.20	4.73	3.08	5.95	4.01	6.90	4.57	8.03	5.01
				1.14	0.77	1.49	1.02	1.95	1.20	2.94	1.86	4.07	2.61	5.33	3.53	6.18	4.02	7.20	4.41
				0.96	0.65	1.15	0.77	1.51	0.94	2.24	1.41	2.96	1.87	4.23	2.73	4.91	3.11	5.71	3.41
7	14	25	19	0.87	0.72	1.23	1.03	2.09	1.37	2.68	1.89	3.91	2.76	4.82	3.58	5.59	4.08	6.51	4.48
				0.78	0.64	1.08	0.86	1.59	1.05	2.31	1.60	3.42	2.36	4.39	3.17	5.09	3.61	5.93	3.96
				0.68	0.54	0.88	0.66	1.25	0.83	1.81	1.23	2.56	1.70	3.59	2.48	4.16	2.83	4.85	3.10
9	12	25	19	1.35	0.91	1.83	1.26	2.61	1.59	3.48	2.21	4.54	3.00	5.73	3.92	6.65	4.47	7.74	4.90
				1.18	0.79	1.52	1.03	1.91	1.18	2.92	1.85	3.87	2.53	5.10	3.44	5.92	3.92	6.89	4.30
				0.98	0.66	1.15	0.77	1.46	0.91	2.18	1.38	2.77	1.79	4.01	2.64	4.65	3.01	5.41	3.30
9	14	25	19	0.97	0.76	1.33	1.07	2.13	1.39	2.75	1.91	3.78	2.71	4.66	3.52	5.41	4.01	6.29	4.40
				0.86	0.67	1.14	0.88	1.59	1.05	2.34	1.62	3.27	2.30	4.22	3.10	4.90	3.53	5.70	3.88
				0.73	0.56	0.90	0.67	1.23	0.82	1.80	1.23	2.41	1.65	3.41	2.41	3.96	2.75	4.60	3.01
9	16	25	19	0.59	0.59	0.86	0.86	1.52	1.15	1.87	1.59	2.86	2.37	3.42	3.07	3.97	3.50	4.62	3.84
				0.53	0.53	0.72	0.72	1.17	0.89	1.65	1.35	2.55	2.03	3.18	2.72	3.69	3.10	4.29	3.40
				0.45	0.45	0.60	0.56	0.93	0.70	1.32	1.05	1.96	1.48	2.69	2.14	3.12	2.44	3.63	2.68
11	14	25	19	1.03	0.78	1.39	1.09	2.11	1.38	2.75	1.91	3.55	2.62	4.41	3.42	5.12	3.90	5.95	4.28
				0.90	0.68	1.16	0.89	1.54	1.03	2.31	1.60	3.05	2.21	3.96	3.00	4.59	3.42	5.35	3.75
				0.75	0.57	0.90	0.67	1.17	0.80	1.74	1.21	2.21	1.57	3.16	2.31	3.67	2.63	4.27	2.89
11	16	25	19	0.63	0.63	0.90	0.90	1.57	1.17	1.95	1.61	2.71	2.32	3.24	3.00	3.76	3.42	4.37	3.75
				0.56	0.56	0.75	0.75	1.17	0.89	1.68	1.37	2.39	1.97	3.00	2.65	3.48	3.02	4.05	3.31
				0.48	0.47	0.62	0.57	0.91	0.70	1.31	1.05	1.81	1.42	2.50	2.07	2.90	2.36	3.38	2.59
11	18	25	19	0.45	0.45	0.67	0.67	0.91	0.91	1.25	1.25	1.94	1.94	2.49	2.49	2.89	2.84	3.36	3.11
				0.40	0.40	0.56	0.56	0.71	0.71	1.08	1.08	1.68	1.67	2.23	2.23	2.59	2.54	3.01	2.79
				0.35	0.35	0.44	0.44	0.57	0.84	0.84	0.84	1.28	1.23	1.77	1.77	2.05	2.02	2.39	2.21
3	6	27	19	2.17	1.40	2.96	1.94	3.95	2.44	5.40	3.40	7.05	4.56	9.06	5.97	10.51	6.81	12.23	7.46
				1.88	1.22	2.41	1.58	2.89	1.80	4.49	2.83	5.95	3.83	7.99	5.22	9.27	5.95	10.79	6.53
				1.55	1.01	1.80	1.17	2.20	1.39	3.33	2.11	4.20	2.69	6.17	3.99	7.16	4.55	8.33	4.99
3	8	27	19	1.85	1.26	2.53	1.75	3.56	2.24	4.79	3.10	6.42	4.27	8.16	5.57	9.47	6.35	11.02	6.96
				1.62	1.10	2.10	1.43	2.63	1.67	4.02	2.60	5.47	3.61	7.25	4.89	8.41	5.57	9.79	6.11
				1.35	0.92	1.60	1.08	2.03	1.30	3.03	1.96	3.92	2.56	5.68	3.77	6.59	4.30	7.67	4.71
3	10	27	19	1.50	1.11	2.06	1.56	3.12	2.03	4.13	2.80	5.74	3.97	7.20	5.16	8.35	5.88	9.72	6.45
				1.32	0.97	1.75	1.28	2.34	1.53	3.50	2.37	4.93	3.37	6.46	4.55	7.49	5.19	8.72	5.69
				1.12	0.82	1.37	0.98	1.82	1.20	2.68	1.80	3.60	2.41	5.15	3.53	5.97	4.02	6.95	4.41
5	8	27	19	1.92	1.29	2.62	1.79	3.56	2.24	4.83	3.12	6.28	4.21	8.02	5.51	9.30	6.28	10.83	6.89
				1.67	1.12	2.14	1.45	2.60	1.66	4.03	2.60	5.31	3.54	7.09	4.82	8.22	5.49	9.57	6.03
				1.38	0.93	1.61	1.08	1.98	1.28	2.99	1.94	3.77	2.49	5.51	3.69	6.39	4.21	7.44	4.61
5	10	27	19	1.60	1.15	2.18	1.60	3.16	2.05	4.21	2.84	5.63	3.92	7.10	5.12	8.24	5.84	9.59	6.40
				1.40	1.01	1.82	1.31	2.34	1.53	3.54	2.38	4.81	3.32	6.34	4.49	7.35	5.12	8.56	5.61
				1.17	0.84	1.40	0.99	1.80	1.19	2.67	1.80	3.47	2.36	5.00	3.46	5.80	3.94	6.75	4.33
5	12	27	19	1.22	1.00	1.68	1.41	2.70	1.84	3.51	2.53	4.90	3.62	6.08	4.70	7.05	5.36	8.21	5.88
				1.09	0.88	1.45	1.17	2.02	1.39	2.99	2.14	4.24	3.07	5.50	4.15	6.38	4.73	7.43	5.19
				0.93	0.74	1.15	0.89	1.57	1.09	2.30	1.63	3.13	2.21	4.43	3.22	5.14	3.67	5.98	4.03
7	10	27	19	1.66	1.18	2.25	1.63	3.15	2.04	4.23	2.85	5345	3.85	6.91	5.04	8.02	5.75	9.33	6.30
				1.44	1.02	1.85	1.33	2.29	1.51	3.52	2.37	4.63	3.24	6.13	4.41	7.11	5.03	8.28	5.51
				1.19	0.85	1.39	0.99	1.74	1.17	2.62	1.77	3.30	2.28	4.79	3.37	5.56	3.84	6.47	4.21
7	12	27	19	1.32	1.04	1.79	1.45	2.72	1.85	3.57	2.56	4.76	3.56	5.93	4.64	6.88	5.29	8.01	5.80
				1.16	0.91	1.51	1.19	2.01	1.39	3.01	2.15	4.10	3.01	5.33	4.08	6.18	4.65	7.20	5.10
				0.97	0.76	1.17	0.90	1.55	1.08	2.28	1.63	2.98	2.15	4.26	3.15	4.94	3.59	5.75	3.94
7	14	27	19	0.92	0.89	1.27	1.28	2.22	1.63	2.81	2.26	3.98	3.25	4.85	4.22	5.63	4.81	6.55	5.28
				0.82	0.78	1.12	1.04	1.67	1.24	2.42	1.91	3.48	2.77	4.43	3.73	5.14	4.25	5.98	4.66
				0.71	0.66	0.91	0.89	1.30	0.98	1.88	1.46	3.61	1.99	3.64	2.90	4.22	3.31	4.91	3.63
9	12	27	19	1.37	1.06	1.82	1.47	2.70	1.84	3.57	2.56	4.55	3.48	5.70	4.55	6.61	5.19	7.70	5.69
				1.19	0.93	1.53	1.20	1.96	1.36	2.98	2.14	3.88	2.93	5.09	3.98	5.90	4.54	6.87	4.98
				0.99	0.76	1.16	0.89	1.57	1.05	2.22	1.60	2.79	2.07	4.02	3.05	4.66	3.48	5.43	3.81
9	14	27	19	1.01	0.92	1.36	1.29	2.24	1.64	2.86	2.28	3.82	3.19	4.66	4.15	5.41	4.73	6.29	5.19
				0.89	0.80	1.17	1.06	1.65	1.24	2.43	1.92	3.32	2.70	4.25	3.66	4.93	4.17	5.74	4.58
				0.76	0.68	0.93	0.80	1.27	0.97	1.86	1.45	2.45	1.93	3.45	2.83	4.00	3.23	4.66	3.54
9	16	27	19	0.75	0.75	1.07	1.07	1.68	1.42	2.04	1.96	2.96	2.87	3.71	3.71	4.30	4.23	5.01	4.64
				0.67	0.67	0.90	0.90	1.27	1.09	1.78	1.68	2.64	2.45	3.29	3.29	3.82	3.75	4.44	4.11
				0.57	0.57	0.69	0.69	1.00	0.86	1.41	1.28	2.03	1.77	2.77	2.57	3.21	2.93	3.74	3.21
11	14	27	19	1.06	0.94	1.41	1.31	2.21	1.63	2.85	2.27	3.58	3.10	4.39	4.05	5.09	4.62	5.93	5.06
				0.92	0.82	1.18	1.06	1.59	1.21	2.39	1.90	3.08	2.61	3.97	3.55	4.61	4.05	5.36	4.44
				0.76	0.68	0.91	0.78	1.20	0.94	1.78	1.42	2.24	1.85	3.19	2.73	3.70	3.11	4.31	3.41
11	16	27	19	0.79	0.79	1.11	1.11	1.71	1.43	2.09	1.98	2.80	2.80	3.62	3.62	4.20	4.13	4.89	4.53
				0.69	0.69	0.91	0.91	1.26	1.08	1.79	1.67	2.46	2.38	3.20	3.20	3.71	3.65	4.32	4.00
				0.58	0.58	0.70	0.70	0.97	0.85	1.39	1.27	1.87	1.71	2.56	2.50	2.97	2.85	3.46	3.13
11	18	27	19	0.61	0.61	0.88	0.88	1.19	1.19	1.63	1.63	2.43	2.43	3.13	3.13	3.63	3.57	4.23	3.91
				0.54	0.54	0.74	0.74	0.82	0.92	1.40	1.40	2.08	2.08	2.78	2.78	3.22	3.17	3.75	3.48
				0.46	0.46	0.58	0.58	0.73	0.73	1.08	1.08	1.52	1.52	2.20	2.20	2.55	2.51	2.97	2.75

Technical Data At Conditions Non Standard

2 PIPES   **3 ROWS**

Water Temp IN °C	Out °C	Air DB °C	WB °C	012 Total [kW]	012 Sens [kW]	020 Total [kW]	020 Sens [kW]	025 Total [kW]	025 Sens [kW]	035 Total [kW]	035 Sens [kW]	050 Total [kW]	050 Sens [kW]	060 Total [kW]	060 Sens [kW]	080 Total [kW]	080 Sens [kW]	090 Total [kW]	090 Sens [kW]
3	6	29	21	2.56	1.51	3.50	2.08	4.59	2.62	6.32	3.64	8.26	4.86	10.68	6.36	12.39	7.25	14.42	7.95
				2.22	1.30	2.85	1.68	3.35	1.92	5.25	3.03	6.95	4.08	9.39	5.56	10.89	6.34	12.68	6.95
				1.83	1.08	2.12	1.25	2.56	1.48	3.89	2.25	4.89	2.86	7.21	4.24	8.36	4.83	9.73	5.30
3	8	29	21	2.26	1.37	3.09	1.90	4.21	2.43	5.73	3.36	7.66	4.58	9.80	5.98	11.37	6.82	13.23	7.48
				1.97	1.19	2.54	1.55	3.11	1.80	4.80	2.81	6.49	3.86	8.68	5.24	10.07	5.97	11.72	6.55
				1.64	0.99	1.92	1.16	2.40	1.40	3.60	2.11	4.62	2.73	6.74	4.03	7.82	4.59	9.10	5.04
3	10	29	21	1.92	1.23	2.64	1.71	3.80	2.23	5.10	3.07	7.00	4.30	8.89	5.59	10.31	6.37	12.00	6.99
				1.69	1.07	2.21	1.41	2.83	1.67	4.31	2.59	5.98	3.64	7.92	4.92	9.19	5.61	10.69	6.15
				1.42	0.90	1.70	1.07	2.20	1.31	3.27	1.96	4.32	2.60	6.23	3.80	7.23	4.33	8.41	4.75
5	8	29	21	2.33	1.40	3.17	1.93	4.21	2.42	5.77	3.38	7.51	4.52	9.67	5.92	11.22	6.75	13.05	7.40
				2.01	1.21	2.58	1.56	3.08	1.78	4.80	2.81	6.33	3.79	8.52	5.17	9.88	5.89	11.50	6.46
				1.66	1.00	1.92	1.16	2.35	1.37	3.56	2.09	4.47	2.66	6.57	3.95	7.62	4.50	8.87	4.94
5	10	29	21	2.02	1.27	2.75	1.76	3.83	2.24	5.17	3.10	6.89	4.25	8.78	5.55	10.18	6.33	11.85	6.94
				1.76	1.10	2.27	1.43	2.83	1.67	4.33	2.60	5.86	3.58	7.79	4.86	9.04	5.54	10.52	6.08
				1.47	0.92	1.73	1.07	2.17	1.29	3.25	1.95	4.19	2.54	6.08	3.74	7.05	4.26	8.21	4.68
5	12	29	21	1.66	1.12	2.29	1.57	3.39	2.04	4.50	2.82	6.20	3.96	7.81	5.16	9.06	5.88	10.54	6.45
				1.46	0.98	1.93	1.30	2.53	1.54	3.81	2.37	5.32	3.36	6.99	4.54	8.11	5.18	9.44	5.68
				1.24	0.83	1.50	0.98	1.97	1.20	2.90	1.80	3.87	2.40	5.54	3.51	6.43	4.00	7.48	4.39
7	10	29	21	2.07	1.29	2.82	1.78	3.81	2.23	5.18	3.11	6.71	4.17	8.59	5.47	9.96	6.24	11.60	6.84
				1.79	1.12	2.30	1.44	2.78	1.64	4.31	2.59	5.67	3.50	7.58	4.78	8.79	5.45	10.23	5.98
				1.48	0.92	1.72	1.07	2.11	1.27	3.20	1.93	4.01	2.46	5.87	3.65	6.81	4.16	7.92	4.56
7	12	29	21	1.74	1.16	2.38	1.61	3.41	2.05	4.55	2.84	6.05	3.90	7.65	5.10	8.87	5.81	10.33	6.38
				1.52	1.01	1.98	1.31	2.51	1.53	3.82	2.38	5.16	3.30	6.82	4.47	7.91	5.10	9.21	5.59
				1.27	0.84	1.51	0.99	1.93	1.19	2.88	1.79	3.72	2.34	5.37	3.44	6.23	3.92	7.25	4.30
7	14	29	21	1.37	1.01	1.89	1.43	2.94	1.85	3.84	2.55	5.32	3.62	6.62	4.71	7.68	5.37	8.94	5.89
				1.21	0.89	1.61	1.18	2.20	1.39	3.27	2.15	4.59	3.07	5.97	4.15	6.93	4.73	8.06	5.19
				1.03	0.75	1.27	0.89	1.71	1.09	2.50	1.64	3.37	2.20	4.79	3.20	5.56	3.65	6.47	4.00
9	12	29	21	1.79	1.17	2.43	1.63	3.37	2.03	4.54	2.83	5.84	3.82	7.41	5.00	8.60	5.70	10.00	6.25
				1.55	1.01	1.99	1.32	2.45	1.50	3.78	2.36	4.95	3.21	6.58	4.38	7.63	4.99	8.88	5.48
				1.28	0.84	1.50	0.98	1.86	1.16	2.81	1.76	3.52	2.26	5.13	3.35	5.95	3.82	6.93	4.19
9	14	29	21	1.45	1.04	1.97	1.46	2.95	1.85	3.88	2.56	5.15	3.55	6.43	4.63	7.46	5.28	8.68	5.79
				1.27	0.91	1.65	1.19	2.17	1.38	3.27	2.15	4.42	3.00	5.77	4.07	6.69	4.64	7.79	5.09
				1.07	0.76	1.28	0.90	1.67	1.08	2.47	1.63	3.21	2.13	4.59	3.14	5.32	3.58	6.20	3.93
9	16	29	21	1.04	0.90	1.44	1.27	2.43	1.65	3.11	2.27	4.35	3.26	5.32	4.24	6.17	4.83	7.18	5.30
				0.93	0.79	1.26	1.05	1.82	1.25	2.67	1.93	3.79	2.77	4.86	3.74	5.64	4.26	6.56	4.68
				0.80	0.67	1.01	0.80	1.42	0.98	2.06	1.47	2.83	1.99	3.97	2.90	4.61	3.31	5.36	3.63
11	14	29	21	1.49	1.06	2.01	1.47	2.90	1.83	3.85	2.55	4.90	3.46	6.15	4.53	7.13	5.16	8.30	5.66
				1.29	0.92	1.66	1.19	2.10	1.36	3.21	2.13	4.17	2.91	5.49	3.97	6.37	4.53	7.41	4.96
				1.07	0.76	1.25	0.89	1.59	1.05	2.39	1.59	2.99	2.05	4.32	3.04	5.01	3.47	5.83	3.80
11	16	29	21	1.12	0.93	1.52	1.30	2.44	1.65	3.13	2.28	4.16	3.19	5.10	4.16	5.92	4.74	6.89	5.20
				0.99	0.81	1.30	1.06	1.80	1.24	2.66	1.92	3.60	2.70	4.62	3.65	5.36	4.16	6.24	4.56
				1.83	0.68	1.02	0.80	1.38	0.97	2.02	1.45	2.65	1.92	3.74	2.82	4.34	3.21	5.05	3.53
11	18	29	21	1.77	0.77	1.10	1.10	1.87	1.44	2.29	1.99	3.28	2.88	3.89	3.75	4.51	4.28	5.25	4.69
				0.68	0.68	0.92	0.92	1.41	1.10	1.99	1.69	2.91	2.46	3.62	3.31	4.20	3.77	4.89	4.14
				0.58	0.58	0.73	0.70	1.10	0.87	1.57	1.29	2.22	1.77	3.05	2.58	3.54	2.94	4.12	3.23
3	6	31	23	2.98	1.59	4.08	2.20	5.26	2.77	7.30	3.86	9.54	5.11	12.39	6.70	14.37	7.64	16.73	8.38
				2.57	1.38	3.30	1.77	3.85	2.03	6.05	2.30	8.01	4.28	10.85	5.84	12.59	6.66	14.65	7.30
				2.12	1.14	2.44	1.31	2.94	1.56	4.47	2.37	5.61	2.99	8.30	4.45	9.63	5.07	11.21	5.56
3	8	31	23	2.69	1.46	3.68	2.02	4.90	2.59	6.73	3359	8.95	4.85	11.54	6.33	13.39	7.22	15.58	7.91
				2.33	1.27	3.01	1.65	3.62	1.92	5.61	2.99	7.56	4.08	10.16	5.54	11.79	6.32	13.72	6.93
				1.94	1.06	2.26	1.48	2.78	1.48	4.19	2.24	5.35	.88	7.85	4.25	9.11	4.85	10.60	5.31
3	10	31	23	2.39	1.30	3.25	1.85	4.51	2.40	6.12	3.31	8.33	4.58	10.66	5.97	12.37	6.81	14.39	7.46
				2.07	1.16	2.69	1.52	3.35	1.79	5.14	2.78	7.08	3.87	9.44	5.24	10.95	5.97	12.74	6.55
				1.73	0.97	2.05	1.14	2.60	1.40	3.88	2.10	5.07	2.75	7.36	4.04	8.54	4.61	9.94	5.05
5	8	31	23	2.75	1.49	3.76	2.06	4.90	2.59	6.76	3.60	8.80	4.79	11.40	6.27	13.22	7.15	15.39	7.84
				2.37	1.29	3.04	1.66	3.58	1.90	5.61	2.99	7.40	4.01	10.00	5.48	11.60	6.25	13.50	6.85
				1.95	1.06	2.26	1.23	2.73	1.46	4.15	2.22	5.19	2.81	7.67	4.17	8.90	4.75	10.35	5.21
5	10	31	23	2.45	1.37	3.35	1.89	4.53	2.41	6.18	4.53	8.21	4.53	10.54	5.92	12.23	6.75	14.23	7.40
				2.13	1.19	2.75	1.54	3.34	1.79	4.16	2.79	6.94	3.82	9.30	5.19	10.79	5.92	12.56	6.49
				1.77	0.99	2.07	1.15	2.57	1.38	3.83	2.09	4.93	2.69	7.21	3.97	8.36	4.53	9.73	4.96
5	12	31	23	2.11	1.23	2.90	1.72	4.12	2.22	5.54	3.07	7.55	4.27	9.61	5.56	11.15	6.34	12.97	6.95
				1.85	1.08	2.42	1.41	3.06	1.67	4.67	2.58	6.44	3.61	8.54	4.88	9.91	5.56	11.53	6.10
				1.56	0.90	1.85	1.06	2.37	1.30	3.53	1.95	4.63	2.57	6.70	3.77	7.77	4.30	9.05	4.71
7	10	31	23	2.50	1.39	3.41	1.92	4.51	2.40	4.51	2.40	6.19	3.34	8.02	4.46	9.30	5.08	10.83	5.58
				2.16	1.20	2.77	1.55	3.28	1.76	3.28	1.76	5.13	2.78	6.75	3.74	7.83	4.26	9.11	4.68
				1.78	0.99	2.06	1.14	2.50	1.35	2.50	1.35	3.80	2.06	4.75	2.62	5.51	2.99	6.41	3.28
7	12	31	23	2.19	1.26	2.99	1.75	4.12	2.23	5.58	3.09	7.40	4.21	9.45	5.50	10.96	6.27	12.76	6.88
				1.91	1.10	2.46	1.43	3.03	1.65	4.67	2.58	6.28	3.54	8.36	4.80	9.70	5.47	11.29	6.00
				1.59	0.91	1.86	1.07	2.33	1.28	3.50	1.94	4.47	2.51	6.51	3.69	7.55	4.21	8.79	4.61
7	14	31	23	1.83	1.13	2.52	1.58	3.68	2.04	4.91	2.82	6.70	3.94	8.47	5.13	9.83	5.85	11.43	6.41
				1.61	0.99	2.12	1.30	2.74	1.53	4.15	2.37	5.74	3.34	7.56	4.51	8.77	5.14	10.21	5.64
				1.36	0.83	1.63	0.68	2.21	1.20	3.15	1.80	4.15	2.38	5.97	3.49	6.93	3.98	8.06	4.36
9	12	31	23	2.23	1.28	3.03	1.77	4.08	2.21	5.57	3.08	7.18	4.12	9.21	5.41	10.68	6.17	12.43	6.76
				1.93	1.11	2.47	1.43	2.97	1.63	4.62	2.56	6.06	3.46	8.12	4.72	9.42	5.38	10.96	5.90
				1.59	0.91	1.84	1.06	2.26	1.25	3.42	1.91	4.28	2.43	6.28	3.60	7.28	4.10	8.48	4.50
9	14	31	23	1.91	1.16	2.60	1.61	3.68	2.04	4.93	2.83	6.53	3.87	8.27	5.06	9.59	5.77	11.16	6.33
				1.66	1.01	2.15	1.31	2.71	1.52	4.14	2.37	5.56	3.27	7.36	4.44	8.54	5.06	9.94	5.55
				1.39	0.84	1.64	0.98	2.08	1.18	3.10	1.78	3.98	2.31	5.77	3.41	6.69	3.89	7.79	4.26
9	16	31	23	1.53	1.02	2.10	1.44	3.21	1.85	4.21	2.56	5.78	3.60	7.23	4.69	8.39	5.35	9.76	5.86
				1.35	0.90	1.78	1.18	2.39	1.39	3.57	2.16	4.98	3.05	6.50	4.13	7.54	4.71	8.78	5.16
				1.14	0.75	1.39	0.90	1.85	1.09	2.73	1.64	3.64	2.18	5.19	3.24	6.02	2.62	7.01	2.88
11	14	31	23	1.94	1.17	2.63	1.62	3.63	2.02	4.90	2.81	6.27	3.78	7.99	4.96	9.27	5.65	10.79	6.20
				1.68	1.01	2.15	1.31	2.63	1.49	4.07	2.34	5.31	3.18	7.07	4.33	8.20	4.94	9.54	5.41
				1.38	0.84	1.61	0.97	2.00	1.15	3.02	1.75	3.77	2.23	5.50	3.31	6.38	3.77	7.43	4.14
11	16	31	23	1.59	1.05	2.17	1.46	3.19	1.85	4.22	2.56	5.58	3.53	6.99	4.61	8.11	5.26	9.44	5.76
				1.39	0.91	1.84	1.19	2.35	1.38	3.55	2.15	4.77	2.98	6.26	4.05	7.26	4.62	8.45	5.06
				1.17	0.76	1.39	0.89	1.80	1.07	2.68	1.62	3.45	2.12	4.96	3.11	5.75	3.55	6.70	3.89
11	18	31	23	1.18	0.91	1.64	1.29	2.68	1.65	3.44	2.29	4.77	3.25	5.87	4.24	6.81	4.83	7.92	5.30
				1.05	0.80	1.41	1.06	2.00	1.25	2.94	1.93	4.14	2.76	5.33	3.73	6.18	4.25	7.20	4.66
				0.90	0.67	1.13	0.81	1.55	0.98	2.26	1.47	3.07	1.98	4.33	2.89	5.02	3.29	5.85	3.61

Technical Data At Conditions Non Standard

| 2 PIPES | | | | | | | | | | | | | | | | | | 3 ROWS |

Water Temperature		Air Temperature		412		420		425		435		450		460		480		490	
IN	Out	DB	WB	Cooling Capacity		Cooling Capacity		Cooling Capacity		Cooling Capacity		Cooling Capacity		Cooling Capacity		Cooling Capacity		Cooling Capacity	
				Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens	Total	Sens
°C	°C	°C	°C	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]
3	6	21	15	1.51	1.04	2.13	1.59	2.95	1.97	3.93	2.68	5.05	3.54	6.32	4.68	7.02	5.19	8.22	5.48
				1.30	0.90	1.90	1.41	2.24	1.51	3.26	2.23	4.24	2.97	5.60	4.10	6.22	4.55	7.28	4.80
				1.08	0.75	1.50	1.09	1.73	1.17	2.36	1.62	3.03	2.12	4.34	3.12	4.82	3.46	5.64	3.65
3	8	21	15	1.25	0.91	1.69	1.39	2.62	1.80	3.34	2.38	4.47	3.26	5.47	4.29	6.07	4.76	7.11	5.02
				1.09	0379	1.54	1.24	2.02	1.39	2.80	2.00	3.80	2.75	4.90	3.77	5.44	4.18	6.37	4.41
				0.91	0.67	1.25	0.97	1.57	1.09	2.06	1.48	2.77	1.98	3.88	2.91	4.31	3.23	5.04	3.40
3	10	21	15	0.93	0.76	1.19	1.18	2.22	1.60	2.63	2.05	3.77	2.93	4.48	3.85	4.97	4.27	5.82	4.50
				0.82	0.67	1.12	1.06	1.73	1.25	2.24	1.74	3.25	2.49	4.08	3.40	4.53	3.77	5.30	3.98
				0.70	0.57	0.95	0.84	1.37	0.99	1.70	1.30	2.42	1.82	3.32	2.65	4.32	2.94	4.32	3.10
5	8	21	15	1.27	0.92	1.73	1.41	2.53	1.75	3.32	2.37	4.25	3.15	5.20	4.17	5.77	4.63	6.76	4.88
				1.09	0.80	1.56	1.25	1.92	1.34	2.75	1.98	3.58	2.64	4.63	3.65	5.14	4.05	6.02	4.27
				0.91	0.67	1.24	0.97	1.48	1.04	1.99	1.44	2.57	1.89	3.62	2.79	4.02	3.10	4.71	3.26
5	10	21	15	0.99	0.79	1.28	1.21	2.17	1.58	2.69	2.08	3.62	2.86	4.30	3.77	4.77	4.18	5.59	4.41
				0.86	0.69	1.18	1.09	1.68	1.23	2.26	1.74	3.10	2.42	3.89	3.32	4.32	3.69	5.06	3.88
				0.73	0.58	0.97	0.85	1.31	0.96	1.68	1.30	2.28	1.75	3.13	2.56	3.47	2.84	4.07	3.00
5	12	21	15	0.64	0.64	0.98	0.98	1.72	1.37	1.90	1.73	2.84	2.52	3.30	3.30	3.66	3.66	4.29	3.86
				0.57	0.56	0.89	0.89	1.36	1.08	1.64	1.47	2.48	2.14	2.98	2.93	3.31	3.25	3.87	3.43
				0.49	0.48	0.71	0.71	1.08	0.86	1.26	1.11	1.89	1.58	2.50	2.29	2.78	2.54	3.25	2.68
7	10	21	15	1.01	0.80	1.30	1.23	2.07	1.53	2.65	2.06	3.37	2.75	3.99	3.64	4.43	4.04	5.19	4.26
				0.87	0.69	1.18	1.09	1.57	1.17	2.20	1.72	2.85	2.31	3.58	3.19	3.97	3.54	4.65	3.73
				0.72	0.58	0.96	0.85	1.20	0.91	1.59	1.26	2.06	1.65	2.84	2.44	3.15	2.71	3.69	2.85
7	12	21	15	0.70	0.66	1.01	1.01	1.67	1.35	1.96	1.75	2.68	2.45	3.21	3.21	3.56	3.56	4.17	3.76
				0.61	0.58	0.91	0.91	1.29	1.05	1.66	1.48	2.32	2.08	2.84	2.84	3.15	3.15	3.69	3.32
				0.52	0.49	0.72	0.72	1.01	0.83	1.24	1.10	1.73	1.51	2.29	2.21	2.54	2.45	2.98	2.59
7	14	21	15	0.49	0.49	0.77	0.77	1.15	1.12	1.37	1.37	2.06	2.06	2.69	2.69	2.99	2.99	3.50	3.15
				0.44	0.44	0.70	0.70	0.92	0.89	1.17	1.17	1.77	1.77	2.40	2.40	2.66	2.66	3.12	2.81
				0.38	0.38	0.57	0.57	1.74	0.71	0.90	0.90	0.31	1.31	1.89	1.89	2.10	2.10	2.46	2.21
9	12	21	15	0.72	0.67	1.02	1.02	1.56	1.30	1.92	1.74	2.41	2.34	3.06	3.06	3.40	3.40	3.98	3.58
				0.62	0.58	0.91	0.91	1.18	1.00	1.60	1.45	2.06	1.97	2.70	2.70	3.00	3.00	3.51	3.16
				0.51	0.49	0.71	0.71	0.91	0.78	1.16	1.07	1.51	1.41	2.08	2.08	2.31	2.31	2.70	2.43
9	14	21	15	0.52	0.52	0.80	0.80	1.11	1.11	1.40	1.40	2.00	2.00	2.60	2.60	2.89	2.89	3.38	3.04
				0.46	0.46	0.72	0.72	0.87	0.87	1.19	1.19	1.70	1.70	2.31	2.31	2.56	2.56	3.00	2.70
				0.39	0.39	0.58	0.58	0.69	0.69	0.89	0.89	1.25	1.25	1.81	1.81	2.01	2.01	2.35	2.12
9	16	21	15	0.34	0.34	0.55	0.55	0.84	0.84	0.98	0.98	1.56	1.56	2.04	2.04	2.26	2.26	2.65	2.39
				0.30	0.30	0.50	0.50	0.67	0.67	0.84	0.84	1.34	1.34	1.82	1.82	2.02	2.02	2.37	2.13
				0.26	0.26	0.41	0.41	0.54	0.54	0.65	0.65	1.01	1.01	1.45	1.45	1.61	1.61	1.89	1.70
11	14	21	15	0.53	0.53	0.81	0.81	1.05	1.05	1.39	1.39	1.89	1.89	2.46	2.46	2.73	2.73	3.20	2.88
				0.46	0.46	0.72	0.72	0.82	0.82	1.16	1.16	1.59	1.59	2.17	2.17	2.41	2.41	2.82	2.54
				0.39	0.39	0.57	0.57	0.64	0.64	0.86	0.86	1.15	1.15	1.68	1.68	1.86	1.86	2.18	1.97
11	16	21	15	0.37	0.37	0.58	0.58	0.83	0.83	1.02	1.02	1.51	1.51	1.97	1.97	2.19	2.19	2.56	2.30
				0.33	0.33	0.52	0.52	0.65	0.65	0.87	0.87	1.29	1.29	1.76	1.76	1.95	1.95	2.29	2.06
				0.28	0.28	0.42	0.42	0.52	0.52	0.66	0.66	0.96	0.96	1.38	1.38	1.53	1.53	1.79	1.61
11	18	21	15	0.16	0.16	0.31	0.31	0.51	0.51	0.52	0.52	0.98	0.98	1.31	1.31	1.45	1.45	1.70	1.53
				0.15	0.15	0.28	0.28	0.42	0.42	0.46	0.46	0.86	0.86	1.19	1.19	1.32	1.32	1.55	1.39
				0.13	0.13	0.24	0.24	0.34	0.34	0.37	0.37	0.66	0.66	0.96	0.96	1.07	1.07	1.25	1.12
3	6	23	17	1.86	1.15	2.67	1.76	3.56	2.18	4.81	2.98	6.18	3.90	7.86	5.16	8.72	5.73	10.22	6.04
				1.59	0.99	2.38	1.56	2.70	1.66	3.98	2.47	5.18	3.26	6.92	4.51	7.68	5.01	9.00	5.28
				1.32	0.83	1.86	1.20	2.08	1.29	2.87	1.79	3.69	2.32	5.33	3.43	5.92	3.81	6.93	4.01
3	8	23	17	1.61	1.03	2.26	1.58	3.25	2.02	4.25	2.69	5.63	3.64	7.05	4.79	7.83	5.32	9.17	5.60
				1.39	0.90	2.04	1.41	2.50	1.56	3.55	2.25	4.76	3.06	6.27	4.21	6.96	4.67	8.15	4.93
				1.17	0.76	1.63	1.10	1.94	1.21	2.60	1.66	3.44	2.20	4.90	3.23	5.44	3.59	6.37	3.78
3	10	23	17	1.31	0.90	1.79	1.80	2.88	1.83	3.59	2.38	1.99	3.34	6.12	4.39	6.79	4.87	7.96	5.14
				1.15	0.78	1.64	1.24	2.24	1.43	3.03	2.01	4.26	2.83	5.50	3.87	6.11	4.30	7.15	4.53
				0.98	0.67	1.35	0.98	1.76	1.13	2.27	1.50	3.13	2.06	4.38	3.00	4.86	3.33	5.69	3.51
5	8	23	17	1.62	1.04	2.29	1.59	3.15	1.97	4.21	2.68	5.40	3.53	6.77	4.67	7.51	5.18	8.80	5.46
				1.39	0.90	2.05	1.41	2.39	1.50	3.49	2.22	4.53	2.95	5.98	4.08	6.64	4.53	7.77	4.77
				1.16	0.75	1.61	1.09	1.84	1.16	2.52	1.65	3.23	2.10	4.63	3.11	5.14	3.45	6.02	3.64
5	10	23	17	1.37	0.92	1.87	1.41	2.82	1.81	3.62	2.40	4.82	3.26	5.92	4.30	6.57	4.77	7.70	5.03
				1.18	0.80	1.87	1.26	2.17	1.40	3.03	2.01	4.08	2.75	5.29	3.78	5.87	4.20	6.88	4.42
				0.99	0.67	1.69	0.98	1.69	1.09	2.23	1.48	2.97	1.98	4.17	2.90	4.63	3.22	5.42	3.39
5	12	23	17	1.04	0.78	1.36	1.21	2.42	1.62	2.90	2.08	4.11	2.95	4.91	3.88	5.45	4.31	6.38	4.54
				0.92	0.68	1.26	1.08	1.88	1.26	2.47	1.76	3.53	2.50	4.46	3.43	4.95	3.81	5.80	4.01
				0.78	0.58	1.06	0.86	1.49	1.00	1.86	1.32	2.62	1.83	3.61	2.66	4.01	2.95	4.69	3.11
7	10	23	17	1.37	0.92	1.88	1.41	2.70	1.75	3.57	2.38	4.55	3.14	5.59	4.16	6.20	4.62	7.27	4.87
				1.18	0.80	1.69	1.25	2.05	1.34	2.95	1.98	3.83	2.63	4.97	3.64	5.52	4.04	6.46	4.26
				0.98	0.67	1.33	0.97	1.58	1.04	2.13	1.44	2.74	1.88	3.87	2.78	4.30	3.09	5.03	3.25
7	12	23	17	1.09	0.80	1.42	1.23	2.35	1.59	2.93	2.09	3.92	2.87	4.67	3.78	5.18	4.20	6.07	4.42
				0.95	0.70	1.30	1.10	1.81	1.23	2.46	1.76	3.34	2.42	4.22	3.33	4.68	3.70	5.49	3.90
				0.80	0.59	1.07	0.86	1.41	0.96	1.82	1.30	2.45	1.75	3.38	2.57	3.75	2.85	4.39	3.01
7	14	23	17	0.73	0.65	1.01	1.01	1.89	1.39	2.13	1.76	3.12	2.54	3.56	3.34	3.95	3.71	4.63	3.91
				0.65	0.57	0.91	0.91	1.48	1.09	1.83	1.50	2.71	2.16	3.29	2.96	3.65	3.29	4.28	3.46
				0.56	0.49	0.74	0.74	1.18	0.86	1.40	1.13	2.06	2.59	2.74	2.31	3.04	2.56	3.56	2.70
9	12	23	17	1.09	0.80	1.42	1.23	2.22	1.53	2.86	2.06	3.63	2.75	4.31	3.64	4.78	4.04	5.60	4.26
				0.94	0.69	1.29	1.09	1.68	1.17	2.37	1.72	3.06	2.31	3.86	3.19	4.28	3.54	5.02	3.73
				0.78	0.58	1.04	0.85	1.29	0.91	1.71	1.26	2.21	1.65	3.06	2.44	3.40	2.71	3.98	2.85
9	14	23	17	0.78	0.67	1.03	1.03	1.82	1.36	2.16	1.77	2.92	2.46	3.30	3.25	3.66	3.61	4.29	3.80
				0.68	0.59	0.93	0.93	1.41	1.06	1.82	1.49	2.52	2.08	3.04	2.86	3.37	3.17	3.95	3.35
				0.58	0.50	0.75	0.73	1.10	0.83	1.36	1.11	1.88	1.51	2.50	2.22	2.78	2.46	3.25	2.60
9	16	23	17	0.51	0.51	0.80	0.80	1.29	1.14	1.41	1.41	2.10	2.10	2.74	2.74	3.04	3.04	3.56	3.21
				0.45	0.45	0.72	0.72	1.03	0.90	1.20	1.20	1.80	1.80	2.44	2.44	2.71	2.71	3.17	2.85
				0.39	0.39	0.58	0.58	0.82	0.72	0.92	0.92	1.41	1.33	1.92	1.92	2.13	2.13	2.50	2.25
11	14	23	17	1.03	1.03	1.68	1.30	2.09	1.74	2.61	2.34	3.09	3.09	0.78	0.68	0.87	0.75	1.01	0.80
				0.92	0.92	1.27	1.00	1.73	1.46	2.23	1.97	2.71	2.70	0.68	0.59	0.75	0.65	0.88	0.69
				0.72	0.72	0.98	0.78	1.25	1.07	1.62	1.41	2.16	2.09	0.56	0.49	0.62	0.54	0.73	0.57
11	16	23	17	0.54	0.54	0.82	0.82	1.22	1.12	1.43	1.43	2.02	2.02	2.64	2.64	2.93	2.93	3.43	3.09
				0.47	0.47	0.74	0.74	0.95	0.87	1.21	1.21	1.72	1.82	2.34	2.34	2.60	2.60	3.04	2.74
				0.40	0.40	0.59	0.59	0.75	0.69	0.91	0.91	1.26	1.26	1.83	1.83	2.03	2.03	2.38	2.14
11	18	23	17	0.35	0.35	0.57	0.57	0.86	0.86	1.01	1.01	1.59	1.59	2.08	2.08	2.31	2.31	2.70	2.43
				0.32	0.32	0.52	0.52	0.69	0.69	0.87	0.87	1.37	1.37	1.86	1.86	2.06	2.06	2.42	2.18
				0.27	0.27	0.43	0.43	0.55	0.55	0.67	0.67	1.03	1.03	1.48	1.48	1.64	1.64	1.92	1.73

Technical Data At Conditions Non Standard

2 PIPES **3 ROWS**

Water Temp IN °C	Water Temp Out °C	Air Temp DB °C	Air Temp WB °C	412 Total [kW]	412 Sens [kW]	420 Total [kW]	420 Sens [kW]	425 Total [kW]	425 Sens [kW]	435 Total [kW]	435 Sens [kW]	450 Total [kW]	450 Sens [kW]	460 Total [kW]	460 Sens [kW]	480 Total [kW]	480 Sens [kW]	490 Total [kW]	490 Sens [kW]
3	6	25	19	2.21	1.26	3.24	1.92	4.19	2.37	5.73	3.25	7.37	4.23	9.48	5.59	10.52	6.20	12.32	6.54
				1.90	1.08	2.88	1.70	3.18	1.80	4.73	2.69	6.16	3.53	8.32	4.88	9.24	5.42	10.82	5.71
				1.58	0.90	2.23	1.31	2.45	1.39	3.41	1.95	4.37	2.51	6.36	3.71	7.06	4.12	8.27	4.34
3	8	25	19	1.98	1.15	2.86	1.75	3.91	2.22	5.19	2.98	6.85	3.99	8.70	5.25	9.66	5.83	11.31	6.14
				1.72	0.99	2.56	1.55	2.99	1.70	4.33	2.49	5.76	3.35	7.69	4.60	8.54	5.11	10.00	5.38
				1.44	0.83	2.02	1.21	2.32	1.33	3.16	1.82	4.14	2.40	5.96	3.52	6.62	3.91	7.75	4.12
3	10	25	19	1.71	1.02	2.42	1.56	3.56	2.05	4.58	2.69	6.25	3.71	7.83	4.87	8.69	5.41	10.18	5.70
				1.49	0.89	2.19	1.40	2.76	1.59	3.85	2.26	5.30	3.13	6.98	4.29	7.75	4.76	9.07	5.02
				1.26	0.75	1.76	1.10	2.16	1.25	2.85	1.68	3.86	2.27	5.48	3.31	6.08	3.67	7.12	3.87
5	8	25	19	1.99	1.15	2.88	1.76	3.80	2.16	5.15	2.96	6.60	3.87	8.41	5.12	9.34	5.68	10.93	5.99
				1.71	0.99	2.56	1.55	2.88	1.65	4.25	2.45	5.52	3.24	7.40	4.47	8.21	4.96	9.62	5.23
				1.42	0.83	1.99	1.20	2.22	1.27	3.07	1.78	3.93	2.30	5.68	3.40	6.30	3.77	7.38	3.98
5	10	25	19	1.75	1.04	2.47	1.59	3.50	2.01	4.60	2.70	6.06	3.63	7.61	4.78	8.45	5.31	9.89	5.59
				1.51	0.90	2.23	1.41	12.68	1.55	3.83	2.26	5.11	3.05	6.75	4.19	7.49	4.65	8.78	4.90
				1.27	0.76	1.77	1.10	2.08	1.21	2.80	1.66	3.69	2.19	5.26	3.21	5.84	3.56	6.84	3.76
5	12	25	19	1.45	0.91	2.00	1.40	3.12	1.84	3.93	2.41	5.41	2.05	6.68	4.40	7.41	4.88	8.68	5.15
				1.27	0.80	1.83	1.25	2.42	1.43	3.32	2.03	4.61	2.83	5.98	3.88	6.64	4.31	7.77	4.54
				1.08	0.67	1.49	0.99	1.90	1.13	2.47	1.51	3.38	3.34	4.74	2.99	5.26	3.32	6.16	3.50
7	10	25	19	1.75	1.04	2.48	1.59	3.37	1.95	4.53	2.67	5.78	3.50	7.27	4.64	8.07	5.15	9.45	5.43
				1.50	0.89	2.21	1.40	2.55	1.49	3.74	2.21	4.84	2.93	6.42	4.05	7.13	4.50	8.35	4.74
				1.24	0.75	1.73	1.08	1.96	1.15	2.70	1.61	3.45	2.08	4.95	3.08	5.49	3.42	6.44	3.60
7	12	25	19	1.49	0.92	2.05	1.42	3.04	1.80	3.93	2.41	5.20	3.25	6.41	4.29	7.12	4.76	8.33	5.02
				1.29	0.80	1.85	1.26	2.33	1.39	3.28	2.01	4.40	2.74	5.72	3.77	6.35	4.18	7.44	4.41
				1.08	0.68	1.49	0.99	1.81	1.09	2.41	1.48	3.19	1.97	4.50	2.89	5.00	3.21	5.85	3.38
7	14	25	19	1.16	0.79	1.54	1.23	2.63	1.63	3.21	2.11	4.48	2.96	5.40	3.90	5.99	4.33	7.02	4.56
				1.02	0.69	1.43	1.10	2.05	1.27	2.72	1.78	3.84	2.51	4.88	3.44	5.42	3.82	6.34	4.02
				0.87	0.59	1.19	0.87	1.61	1.00	2.04	1.33	2.84	1.83	3.93	2.67	4.36	2.96	5.11	3.12
9	12	25	19	1.48	0.92	2.04	1.41	2.90	1.74	3.85	2.37	4.89	3.13	6.03	4.14	6.69	4.60	7.84	4.84
				1.27	0.79	1.83	1.25	2.20	1.33	3.18	1.97	4.11	2.62	5.35	3.62	5.94	4.02	6.96	4.24
				1.05	0.66	1.44	0.97	1.69	1.03	2.29	1.43	2.94	1.87	4.17	2.76	4.63	3.06	5.42	3.23
9	14	25	19	1.20	0.81	1.58	1.24	2.55	1.59	3.20	2.10	4.25	2.87	5.11	3.79	5.67	4.21	6.64	4.43
				1.04	0.70	1.45	1.11	1.96	1.23	2.68	1.76	3.62	2.42	4.60	3.33	5.11	3.70	5.98	3.90
				0.88	0.59	1.18	0.87	1.52	0.96	1.98	1.30	2.65	1.75	3.67	2.56	4.07	2.84	4.77	3.00
9	16	25	19	0.83	0.67	1.04	1.04	2.08	1.40	2.39	1.79	3.44	2.56	3.97	3.37	4.41	3.74	5.16	3.94
				0.74	0.59	0.97	0.94	1.63	1.10	2.04	1.52	2.99	2.17	3.65	2.98	4.05	3.31	4.75	3.49
				0.63	0.50	0.85	0.74	1.29	0.87	1.55	1.14	2.25	1.59	3.02	2.32	3.35	2.58	3.93	2.71
11	14	25	19	1.19	0.80	1.56	1.23	2.39	1.52	3.11	2.06	3.92	2.74	4.69	3.63	5.21	4.03	6.10	4.25
				1.02	0.69	1.41	1.09	1.81	1.17	2.57	1.72	3.31	2.30	4.20	3.18	4.66	3.53	5.46	3.72
				0.84	0.58	1.13	0.85	1.39	0.91	1.85	1.26	2.38	1.64	3.31	2.43	3.67	2.70	4.30	2.84
11	16	25	19	0.87	0.68	1.06	1.06	1.99	1.36	2.38	1.79	3.21	2.47	3.66	3.26	4.06	3.62	4.76	3.81
				0.76	0.60	0.99	0.94	1.53	1.06	2.01	1.50	2.76	2.09	3.35	2.87	3.72	3.19	4.36	3.36
				0.64	0.50	0.84	0.74	1.20	0.83	1.50	1.12	2.05	1.51	2.75	2.22	3.05	2.46	3.58	2.60
11	18	25	19	0.53	0.53	0.82	0.82	1.44	1.16	1.44	1.44	2.25	2.13	2.78	2.78	3.09	3.09	3.61	3.25
				0.47	0.47	0.75	0.75	1.15	0.91	1.26	1.23	2.01	1.82	2.48	2.48	2.75	2.75	3.22	2.90
				0.40	0.40	0.60	0.60	0.92	0.73	0.99	0.94	1.57	1.34	1.99	1.95	2.21	2.16	2.59	2.28
3	6	27	19	2.24	1.40	3.23	2.15	4.26	2.63	5.80	3.61	7.39	4.71	9.41	6.24	10.45	6.94	12.23	7.30
				1.92	1.21	2.87	1.90	3.22	2.00	4.78	2.99	6.17	3.93	8.27	5.45	9.18	6.05	10.75	6.38
				1.59	1.00	2.23	1.46	2.47	1.54	3.44	2.16	4.38	2.78	6.34	4.13	7.04	4.58	8.24	4.83
3	8	27	19	2.02	1.29	2.85	1.98	3.98	2.48	5.29	3.35	6.89	4.47	8.65	5.90	9.60	6.55	11.25	6.90
				1.74	1.12	2.56	1.76	3.04	1.90	4.39	2.79	5.80	3.75	7.66	5.17	8.50	5.74	9.96	6.05
				1.45	0.94	2.02	1.36	2.35	1.48	3.19	2.04	4.16	2.68	5.95	3.95	6.60	4.38	7.74	4.62
3	10	27	19	1.76	1.17	2.43	1.80	3.66	2.32	4.70	3.07	6.31	4.20	7.81	5.54	8.67	6.15	10.15	6.48
				1.53	1.02	2.20	1.61	2.82	1.79	3.94	2.58	5.35	3.54	6.97	4.87	7.74	5.41	9.06	5.70
				1.29	0.86	1.78	1.26	2.20	1.40	2.90	1.91	3.89	2.55	5.49	3.74	6.09	4.15	7.14	4.38
5	8	27	19	2.02	1.29	2.87	1.98	3.87	2.42	5.23	3.33	6.63	4.35	8.35	5.77	9.27	6.40	10.86	6.75
				1.73	1.11	2.55	1.75	2.92	1.84	4.31	2.75	5.55	3.63	7.36	5.04	8.17	5.59	9.57	5.90
				1.43	0.93	1.99	1.35	2.24	1.42	3.09	1.99	3.94	2.57	5.66	3.82	6.28	4.24	7.36	4.47
5	10	27	19	1.79	1.19	2.48	1.82	3.58	2.28	4.70	3.07	6.11	4.11	7.57	5.43	8.40	6.03	9.84	6.35
				1.55	1.03	2.23	1.62	2.73	1.75	3.91	2.58	5.15	3.45	6.73	4.76	7.47	5.28	8.75	5.57
				1.29	0.86	1.78	1.26	2.11	1.36	2.84	1.88	3.71	2.47	5.26	3.64	5.84	4.04	6.84	4.26
5	12	27	19	1.51	1.06	2.03	1.64	3.23	2.12	4.07	2.79	5.49	3.84	6.67	5.07	7.40	5.63	8.67	5.93
				1.32	0.93	1.85	1.46	2.49	1.64	3.42	2.35	4.68	3.24	5.99	4.46	6.65	4.95	7.79	5.22
				1.11	0.78	1.51	1.15	1.95	1.29	2.53	1.74	3.42	2.34	4.77	3.43	5.29	3.81	6.20	4.01
7	10	27	19	1.78	1.18	2.47	1.82	3.44	2.21	4.62	3.04	5.82	3.98	7.21	5.29	8.00	5.87	9.37	6.19
				1.52	1.02	2.21	1.61	2.60	1.69	3.80	2.52	4.87	3.32	6.38	4.62	7.08	5.13	8.29	5.41
				1.26	0.85	1.73	1.24	1.99	1.31	2.73	1.83	3.47	2.36	4.94	3.50	5.48	3.89	6.42	4.10
7	12	27	19	1.54	1.07	2.06	1.65	3.14	2.07	4.05	2.78	5.26	3.74	6.38	4.95	7.08	5.49	8.29	5.79
				1.33	0.93	1.87	1.47	2.39	1.59	3.37	2.32	4.45	3.14	5.71	4.34	6.34	4.82	7.42	5.08
				1.11	0.78	1.50	1.14	1.85	1.24	2.46	1.71	3.22	2.26	4.51	3.32	5.01	3.69	5.86	3.88
7	14	27	19	1.24	0.95	1.58	1.47	2.76	1.90	3.37	2.50	4.59	3.46	5.42	4.58	6.02	5.08	7.05	5.36
				1.08	0.83	1.46	1.31	1.13	1.48	2.85	2.10	3.94	2.93	4.92	4.03	5.46	4.47	6.40	4.72
				0.91	0.70	1.22	1.03	1.67	1.16	2.12	1.56	2.91	2.12	3.98	3.11	4.42	3.45	5.17	3.64
9	12	27	19	1.52	1.07	2.04	1.65	2.99	2.00	3.95	2.74	4.94	3.61	5.98	4.79	6.64	5.32	7.77	5.60
				1.30	0.92	1.83	1.46	2.25	1.53	3.25	2.27	4.15	3.01	5.32	4.19	5.91	4.65	6.92	4.90
				1.07	0.77	1.45	1.12	1.72	1.18	2.33	1.65	2.96	2.14	4.16	3.18	4.62	3.53	5.41	3.72
9	14	27	19	1.26	0.96	1.60	1.48	2.66	1.86	3.34	2.48	4.34	3.36	5.09	4.45	5.65	4.94	6.62	5.21
				1.09	0.83	1.47	1.32	2.03	1.43	2.79	2.08	3.69	2.83	4.60	3.91	5.11	4.34	5.98	4.57
				0.91	0.70	1.20	1.03	1.57	1.12	2.04	1.53	2.69	2.04	3.69	3.00	4.10	3.33	4.80	3.51
9	16	27	19	0.93	0.83	1.28	1.28	2.24	1.68	2.59	2.19	3.60	3.07	4.06	4.06	4.51	4.51	5.28	4.75
				0.81	0.73	1.15	1.15	1.74	1.31	21.20	1.85	3.11	2.60	3.73	3.59	4.14	3.98	4.85	4.20
				0.69	0.62	0.91	0.91	1.36	1.04	1.66	1.38	2.34	1.89	3.10	2.77	3.44	3.07	4.03	3.24
11	14	27	19	1.24	0.95	1.57	1.47	2.49	1.79	3.23	2.44	3.99	3.22	4.65	4.39	5.16	4.76	6.05	5.02
				1.05	0.82	1.42	1.30	1.87	1.37	2.66	2.02	3.36	2.70	4.18	3.75	4.64	4.16	5.43	4.39
				0.87	0.69	1.14	1.00	1.43	1.06	1.90	1.48	2.41	1.92	3.31	2.85	3.67	3.16	4.30	3.33
11	16	27	19	0.95	0.84	1.28	1.28	2.12	1.64	2.56	2.17	3.32	2.97	3.91	3.91	4.34	4.34	5.08	4.57
				0.82	0.73	1.15	1.15	1.62	1.27	2.14	1.82	2.85	2.50	3.45	3.45	3.83	3.83	4.49	4.04
				0.69	0.62	0.90	0.90	1.26	0.99	1.58	1.35	2.11	1.81	2.79	2.64	3.10	2.95	3.63	3.11
11	18	27	19	0.69	0.69	1.07	1.07	1.65	1.45	1.85	1.85	2.65	2.65	3.45	3.45	3.83	3.83	4.49	4.04
				0.61	0.61	0.96	0.96	1.29	1.14	1.57	1.57	2.25	2.25	3.06	3.06	3.40	3.40	3.98	3.58
				0.52	0.52	0.77	0.77	1.02	0.90	1.18	1.18	1.70	1.65	2.40	2.40	2.66	2.66	3.12	2.81

Technical Data At Conditions Non Standard

Water Temp IN °C	Out °C	Air DB °C	Air WB °C	412 Total [kW]	412 Sens [kW]	420 Total [kW]	420 Sens [kW]	425 Total [kW]	425 Sens [kW]	435 Total [kW]	435 Sens [kW]	450 Total [kW]	450 Sens [kW]	460 Total [kW]	460 Sens [kW]	480 Total [kW]	480 Sens [kW]	490 Total [kW]	490 Sens [kW]
3	6	29	21	2.61	1.50	3.81	2.28	4.90	2.79	3.86	3.86	8.59	4.99	11.04	6.61	12.25	7.34	14.35	7.73
				2.23	1.29	3.38	2.01	3.71	2.12	3.19	3.19	7.16	4.16	9.68	5.77	10.74	6.40	12.58	6.75
				1.85	1.07	2.61	1.55	2.85	2.66	2.30	2.30	5.06	2.94	7.38	4.36	8.19	4.84	9.59	5.10
3	8	29	21	2.40	1.39	3.45	2.13	4.64	2.66	3.61	3.61	8.11	4.77	10.31	6.29	11.44	6.98	13.40	7.36
				2.06	1.20	3.08	1.88	3.54	2.03	3.00	3.00	6.80	3.99	9.09	5.51	10.09	6.12	11.82	6.45
				1.72	1.01	2.41	1.46	2.73	1.58	2.19	2.19	4.86	2.85	7.01	4.20	7.78	4.66	9.11	4.91
3	10	29	21	2.15	1.28	3.05	1.96	4.34	2.51	3.35	3.35	7.57	4.52	9.51	5.96	10.56	6.62	12.36	6.97
				1.86	1.11	2.74	1.74	3.33	1.93	2.80	2.80	6.39	3.90	8.45	5.23	9.38	5.81	10.99	6.12
				1.57	0.94	2.18	1.35	2.59	1.51	2.06	2.06	4.61	2.73	6.58	4.01	7.30	4.45	8.55	4.69
5	8	29	21	2.39	1.39	3.45	2.13	4.52	2.60	3.58	3.58	7.85	4.65	10.01	6.16	11.11	6.84	13.01	7.21
				2.05	1.20	3.07	1.88	3.42	1.97	2.96	2.96	6.55	3.88	8.79	5.38	9.76	5.97	11.43	6.29
				1.69	0.99	2.37	1.44	2.63	1.52	2.14	2.14	4.64	2.74	6.72	4.07	7.46	4.52	8.74	4.76
5	10	29	21	2.18	1.29	3.09	1.98	4.25	2.46	3.34	3.34	7.36	4.43	9.26	5.85	10.28	6.49	12.04	6.84
				1.87	1.12	2.76	1.75	3.24	1.89	2.78	2.78	6.18	3.71	8.19	5.13	9.09	5.69	10.65	6.00
				1.56	0.94	2.17	1.36	2.50	1.46	2.03	2.03	4.43	2.65	6.34	3.91	7.04	4.34	8.24	4.57
5	12	29	21	1.92	1.18	2.66	1.81	3.93	2.31	3.08	3.08	6.78	4.18	8.42	5.52	9.35	6.13	10.95	6.46
				1.66	1.02	2.41	1.61	3.02	1.78	2.58	2.58	5.74	3.52	7.51	4.85	8.34	5.38	9.76	5.67
				1.40	0.86	1.93	1.26	2.35	1.40	1.90	1.90	4.16	2.53	5.89	3.72	6.54	4.13	7.66	4.35
7	10	29	21	2.16	1.28	3.07	1.97	4.11	2.40	3.30	3.30	7.06	4.30	8.90	5.71	9.88	6.34	11.57	6.68
				1.85	1.10	2.73	1.74	3.10	1.82	2.73	2.73	5.90	3.59	7.84	4.98	8.70	5.53	10.19	5.83
				1.53	0.92	2.12	1.34	2.38	1.41	1.97	1.97	4.18	2.54	6.02	3.77	6.68	4.18	7.83	4.41
7	12	29	21	1.93	1.18	2.68	1.82	3.83	2.26	3.06	3.06	6.54	4.08	8.12	5.40	9.01	5.99	10.56	6.32
				1.66	1.03	2.41	1.61	2.91	1.74	2.55	2.55	5.51	3.42	7.21	4.73	8.00	5.25	9.37	5.53
				1.39	0.86	1.91	1.25	2.25	1.35	1.87	1.87	3.96	2.45	5.62	3.61	6.24	4.01	7.31	4.22
7	14	29	21	1.66	1.07	2.24	1.65	3.48	2.11	2.80	2.80	5.92	3.83	7.22	5.60	8.01	6.22	9.39	6.55
				1.44	0.93	2.04	1.47	2.68	1.63	2.35	2.35	5.03	3.23	6.48	4.44	7.19	4.93	8.42	5.19
				1.21	0.79	1.66	1.15	2.09	1.28	1.74	1.74	3.67	2.33	5.13	3.42	5.69	3.80	6.67	4.00
9	12	29	21	1.91	1.17	2.65	1.81	3.67	2.19	3.02	3.02	6.21	3.94	7.73	5.24	8.58	5.82	10.05	6.13
				1.63	1.01	2.37	1.60	2.77	1.67	2.50	2.50	5.20	3.29	6.82	4.58	7.57	5.08	8.87	5.36
				1.35	0.84	1.85	1.23	2.12	1.29	1.71	1.81	3.69	2.34	5.27	3.47	5.85	3.85	6.85	4.06
9	14	29	21	1.67	1.07	2.25	1.66	3.37	2.06	2.78	2.78	5.66	3.72	6.89	4.93	7.65	5.47	8.96	5.77
				1.44	0.93	2.03	1.47	2.56	1.58	2.32	2.32	4.78	3.12	6.15	4.32	6.83	4.80	8.00	5.05
				1.20	0.78	1.63	1.14	1.98	1.23	1.70	1.70	3.45	2.24	4.84	3.30	5.37	3.66	6.29	3.86
9	16	29	21	1.37	0.96	1.77	1.49	2.99	1.90	2.51	2.51	4.98	3.46	5.91	4.58	6.56	5.08	7.68	5.36
				1.19	0.84	1.63	1.33	2.31	1.48	2.11	2.11	4.26	2.92	5.35	4.03	5.94	4.47	6.96	4.72
				1.00	0.71	1.35	1.04	1.80	1.16	1.57	1.57	3.13	2.11	4.31	3.10	4.78	3.44	5.60	3.63
11	14	29	21	1.63	1.06	2.21	1.64	3.19	1.99	2.73	2.73	5.29	3.58	6.43	4.76	7.14	5.28	8.36	5.57
				1.39	0.92	1.98	1.45	2.40	1.52	2.26	2.26	4.44	2.99	5.72	4.16	6.35	4.62	7.44	4.87
				1.15	0.76	1.56	1.12	1.83	1.17	1.64	1.64	3.16	2.13	4.46	3.16	4.95	3.51	5.80	3.70
11	16	29	21	1.70	0.96	1.77	1.49	2.86	1.85	2.49	2.49	4.69	3.35	5.54	4.45	6.15	4.94	7.20	5.21
				1.18	0.83	1.62	1.32	2.18	1.43	2.08	2.08	3.98	2.82	4.99	3.90	5.54	4.33	6.49	4.56
				0.99	0.70	1.32	1.03	1.68	1.12	1.53	1.53	2.89	2.02	3.99	2.68	4.43	2.97	5.19	3.14
11	18	29	21	1.04	0.84	1.30	1.30	2.44	1.69	2.21	2.21	3.93	3.08	4.46	4.08	4.95	4.53	5.80	4.77
				0.91	0.73	1.17	1.17	1.89	1.32	1.86	1.86	3.40	2.61	4.11	3.59	4.56	3.98	5.34	4.20
				0.77	0.62	1.01	0.92	1.58	1.04	1.39	1.39	2.54	1.89	3.39	2.78	3.76	3.09	4.41	3.25
3	6	31	23	2.99	1.58	4.40	2.39	5.58	2.94	4.07	4.07	9.84	5.23	12.72	6.92	14.12	7.68	16.54	8.10
				2.56	1.35	3.90	2.11	4.22	2.22	3.35	3.35	8.19	4.36	11.13	6.03	12.35	6.69	14.47	7.06
				2.12	1.12	3.00	1.62	3.24	1.71	2.41	2.41	5.78	3.28	8.45	4.55	9.38	5.05	10.99	5.32
3	8	31	23	2.79	1.48	4.06	2.25	5.33	2.81	3.84	3.84	9.38	5.02	12.03	6.62	13.35	7.35	15.64	7.75
				2.40	1.28	3.61	1.99	4.05	2.14	3.18	3.18	7.85	4.20	10.57	5.79	11.73	6.43	13.74	6.77
				2.00	1.07	2.81	1.54	3.13	1.60	2.31	2.31	5.59	2.99	8.10	4.40	8.99	4.88	10.53	5.15
3	10	31	23	2.56	1.38	3.68	2.09	5.04	2.67	3.59	3.59	8.87	4.80	11.27	6.31	12.51	7.00	14.65	7.38
				2.21	1.19	3.30	1.86	3.86	2.05	2.99	2.99	7.46	4.03	9.96	5.53	11.06	6.14	12.95	6.47
				1.85	1.00	2.60	1.45	3.00	1.59	2.19	2.19	5.36	2.88	7.70	4.23	8.55	4.70	10.01	4.95
5	8	31	23	2.78	1.48	4.06	2.25	5.20	2.75	3.81	3.81	7.12	4.91	11.72	6.50	13.01	7.22	15.24	7.61
				2.38	1.27	3.59	1.98	3.93	2.08	3.14	3.14	7.60	4.09	10.27	5.66	11.40	6.28	13.35	6.62
				1.97	1.50	2.77	1.52	3.01	1.60	2.26	2.26	5.36	2.89	7.82	4.28	8.68	4.75	10.17	5.01
5	10	31	23	2.57	1.38	3.71	2.11	4.95	2.62	3.58	3.58	8.65	4.70	11.02	6.21	12.23	6.89	14.33	7.27
				2.21	1.19	3.31	1.87	3.77	2.00	2.97	2.97	7.25	3.93	9.70	5.43	10.77	6.03	12.61	6.35
				1.84	1.00	2.58	1.44	2.91	1.55	2.16	2.16	5.17	2.80	7.46	4.13	8.28	4.58	9.70	4.83
5	12	31	23	2.33	1.28	3.31	1.95	4.65	2.48	3.34	3.34	8.11	4.47	10.22	5.90	11.34	6.55	13.29	6.90
				2.02	1.11	2.98	1.74	3.56	1.91	2.78	2.78	6.84	3.76	9.06	5.17	10.06	5.74	11.78	6.05
				1.69	0.93	2.36	1.35	2.77	1.49	2.04	2.04	4.92	2.70	7.04	3.96	7.81	4.40	9.15	4.63
7	10	31	23	2.55	1.37	3.69	2.10	4.81	2.56	3.54	3.54	8.35	4.58	10.66	6.07	11.83	6.74	13.86	7.10
				2.18	1.18	3.27	1.85	3.63	1.94	2.92	2.92	6.96	3.81	9.35	5.29	10.38	5.87	12.16	6.19
				1.80	0.98	2.53	1.42	2.78	1.49	2.10	2.10	4.92	2.70	7.14	4.00	7.93	4.44	9.28	4.68
7	12	31	23	2.34	1.28	3.33	1.96	4.54	2.43	3.32	3.32	7.86	4.37	9.92	5.78	11.01	6.42	12.90	6.76
				2.01	1.11	2.97	1.74	3.45	1.86	2.75	2.75	6.60	3.66	8.76	5.06	9.72	5.62	11.39	5.92
				1.68	0.93	2.33	1.34	2.66	1.44	2.01	2.01	4.71	2.61	6.76	3.85	7.50	4.27	8.79	4.50
7	14	31	23	2.08	1.18	2.91	1.81	4.22	2.29	3.07	3.07	7.29	4.14	9.08	5.47	10.08	6.07	11.80	6.40
				1.80	1.02	2.63	1.61	3.24	1.77	2.57	2.57	6.16	3.48	8.08	4.80	8.97	5.33	10.50	5.62
				1.51	0.86	2.10	1.25	2.52	1.38	1.89	1.89	4.45	2.50	6.32	3.68	7.02	4.08	8.22	4.31
9	12	31	23	2.31	1.27	3.29	1.95	4.38	2.36	5.98	5.98	7.53	4.24	9.51	5.63	10.56	6.25	12.36	6.59
				1.97	1.09	2.92	1.72	3.30	1.79	2.70	2.70	6.29	3.53	8.37	4.91	9.29	5.45	10.88	5.74
				1.63	0.91	2.27	1.32	2.53	1.38	1.95	1.95	4.45	2.50	6.41	3.71	7.12	4.12	8.33	4.34
9	14	31	23	2.09	1.18	2.91	1.81	4.10	2.24	3.04	3.04	7.01	4.03	8.73	5.34	9.69	5.93	11.35	6.25
				1.79	1.02	2.61	1.60	3.12	1.72	2.53	2.53	5.90	3.38	7.74	4.68	8.59	5.19	10.06	5.48
				1.49	0.85	2.06	1.24	2.40	1.33	1.85	1.85	4.23	2.41	6.02	3.56	6.68	3.95	7.83	4.17
9	16	31	23	1.81	1.07	2.47	1.65	3.76	2.10	2.80	2.80	6.39	3.80	7.84	5.02	8.70	5.57	10.19	5.87
				1.57	0.93	2.24	1.47	2.88	1.62	2.34	2.34	5.42	3.20	7.01	4.41	7.78	4.90	9.11	5.16
				1.32	0.79	1.81	1.15	2.24	1.27	1.73	1.73	3.94	2.30	5.53	3.38	6.14	3.75	7.19	3.95
11	14	31	23	2.05	1.16	2.86	1.79	3.92	2.17	2.99	2.99	6.65	3.89	8.28	5.18	9.19	5.75	10.76	6.06
				1.75	1.00	2.55	1.58	2.95	1.65	2.47	2.47	5.56	3.25	7.31	4.52	8.11	5.02	9.50	5.29
				1.44	0.83	1.99	1.21	2.26	1.27	1.79	1.79	3.94	2.30	5.64	3.42	6.26	3.80	7.33	4.00
11	16	31	23	1.81	1.07	2.46	1.65	3.62	2.04	2.77	2.77	6.09	3.69	7.45	4.89	8.27	5.43	9.69	5.72
				1.56	0.93	2.22	1.46	2.75	1.57	2.31	2.31	5.14	3.09	6.67	4.28	7.40	4.75	8.67	5.01
				1.30	0.78	1.77	1.13	2.12	1.22	1.69	1.69	3.70	2.21	5.20	3.27	5.77	3.63	6.76	3.83
11	18	31	23	1.51	0.96	1.98	1.49	3.24	1.90	2.51	2.51	5.41	3.45	6.47	4.56	7.18	5.06	8.41	5.34
				1.31	1.84	1.81	1.33	2.49	1.47	2.11	2.11	4.62	2.91	5.84	4.01	6.48	4.45	7.59	4.69
				1.10	0.71	1.49	1.04	1.94	1.15	1.56	1.56	3.38	2.10	4.67	3.08	5.18	3.42	6.07	3.60

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