

TCE PE - Edf. Garagem

VRF System Selection Report

October 05, 2017

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1、 Project and Room Information

Basic Information

Project Name: TCE PE - Edf. Garagem	Location:
Sold To:	Region: LA_BR
Sales Engineer Name: Diogo Candido	Selection Mode: Cooling+Heating

2、Indoor/Outdoor Selection

Basic Information	
Indoor Cooling DB: 27.0 °C	Outdoor Cooling DB: 35.0 °C
Indoor Cooling WB: 19.0 °C	Outdoor Heating DB: 7.0 °C
Indoor Heating DB: 20.0 °C	Outdoor Heating WB: 6.0 °C
	Outdoor Cooling Inlet Water: -
	Outdoor Heating Inlet Water: -

2.1 SYS1 [Commercial VRF HP, FSNS7B]

(1) VRF Indoor Unit Selection

*This SHF(Sensible Heat Factor) data is based on nominal condition and SHF data is for your reference.

*The default date of AirFlow is that from High.

Room No	Room Name	Room A/C Requirement						Selected Indoor Unit Performance						Remarks	
		DB/ WB(Cooling)	DB(Heating)	Cooling/ Heating Load	Sensible Heat Load	Air Flow	ESP	No.	Model	Qty	Actual Cooling/Heating Capacity	Actual Sensible Cooling Capacity	Air Flow		ESP
		°C	°C	kW	kW	m ³ /min	Pa				kW	kW	m ³ /min		Pa
		27/19	20	0.0/0.0	0.0	0	0	EXPEDICIAO / DIRIA	RCI-2.0F SN3 B4	1	4.7/5.2	3.7	17	0	OK
		27/19	20	0.0/0.0	0.0	0	0	Ind 2	RCI-2.0F SN3 B4	1	4.7/5.2	3.7	17	0	OK
		27/19	20	0.0/0.0	0.0	0	0	CHEFE D	RCI-2.0F SN3 B4	1	4.7/5.2	3.7	17	0	OK

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								I M A R E U N I Ã O	RCI-1.5F SN3 B4	1	3.5/3 .9	2.7	17	0	O K
		27/1 9	20	0.0 /0. 0	0.0	0	0	R E C E P Ã O	RCI-1.0F SN3 B4	1	2.4/2 .6	1.9	13	0	O K
								D I A R							
		27/1 9	20	0.0 /0. 0	0.0	0	0	D I A R	RCI-2.5F SN3 B4	1	5.9/6 .6	4.2	23	0	O K
		27/1 9	20	0.0 /0. 0	0.0	0	0	D I A R	RCI-2.5F SN3 B4	1	5.9/6 .6	4.2	23	0	O K
		27/1 9	20	0.0 /0. 0	0.0	0	0	S A L A	RPI-4.0F SN3 B2	1	9.4/1 0.5	6.8	23	0	O K
								C H E F E							
		27/1 9	20	0.0 /0. 0	0.0	0	0	D I P A	RCI-2.0F SN3 B4	1	4.7/5 .2	3.7	17	0	O K
		27/1 9	20	0.0 /0. 0	0.0	0	0	C H E F E	RCI-2.0F SN3 B4	1	4.7/5 .2	3.7	17	0	O K
								D I A R							
		27/1 9	20	0.0 /0. 0	0.0	0	0	I n d 8	RCI-1.5F SN3 B4	1	3.5/3 .9	2.7	17	0	O K

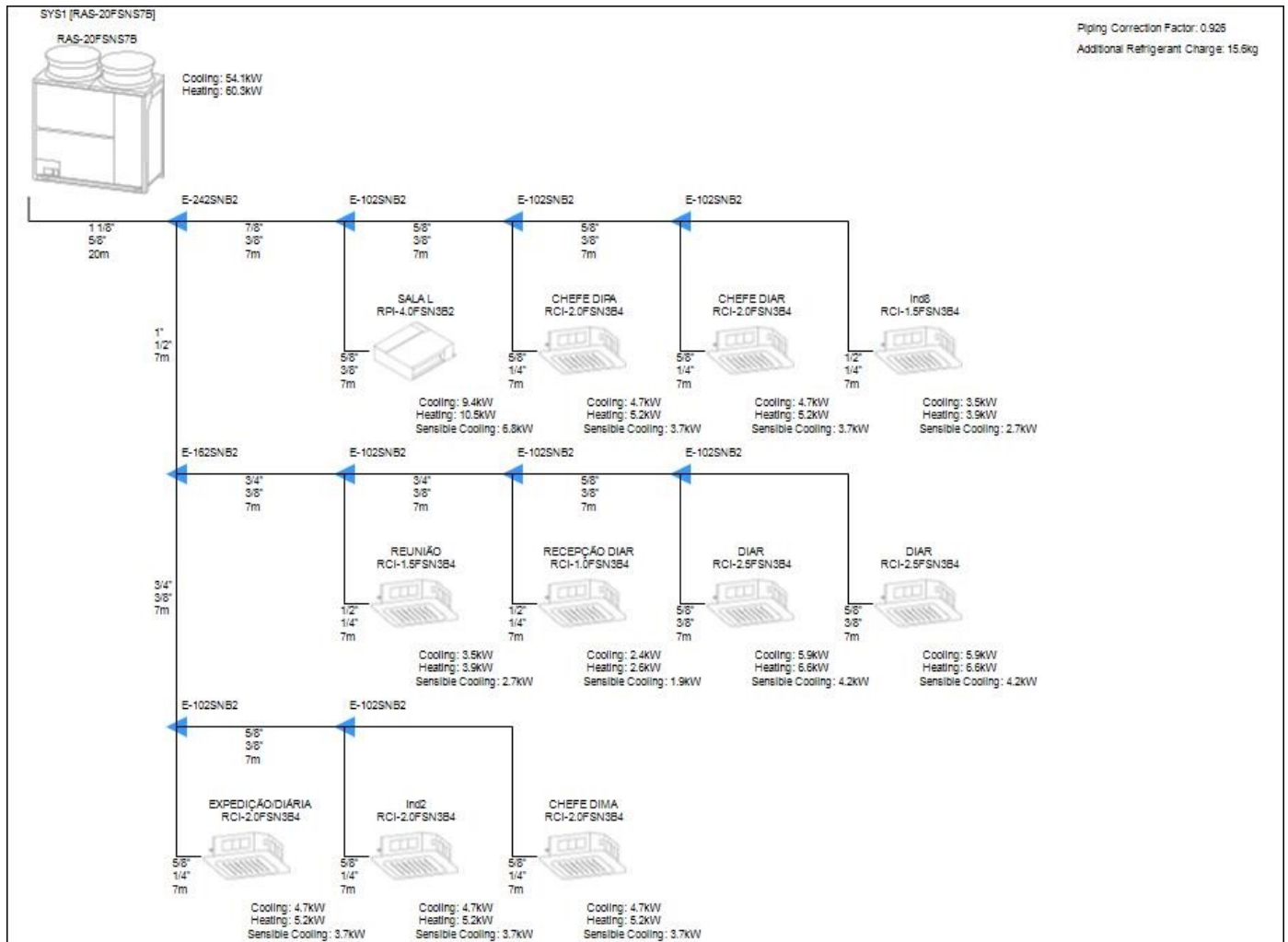
Total	0.0	-	-	1	54.1/	20
	70.0			1	60.1	60.1

(2) Outdoor Unit Selection

Outdoor Unit Model (Power Supply)	DB/WB(Heating)	DB(Cooling)	Actual Cooling/Heating Capacity	Additional Refrigerant Charge	Capacity Ratio
	°C	°C	kW	kg	
RAS-20FSNS7B (380V/3Ph/60Hz)	7/6	35	54.1/60.3	15.6	115%

3、 System Drawing

3.1 SYS1

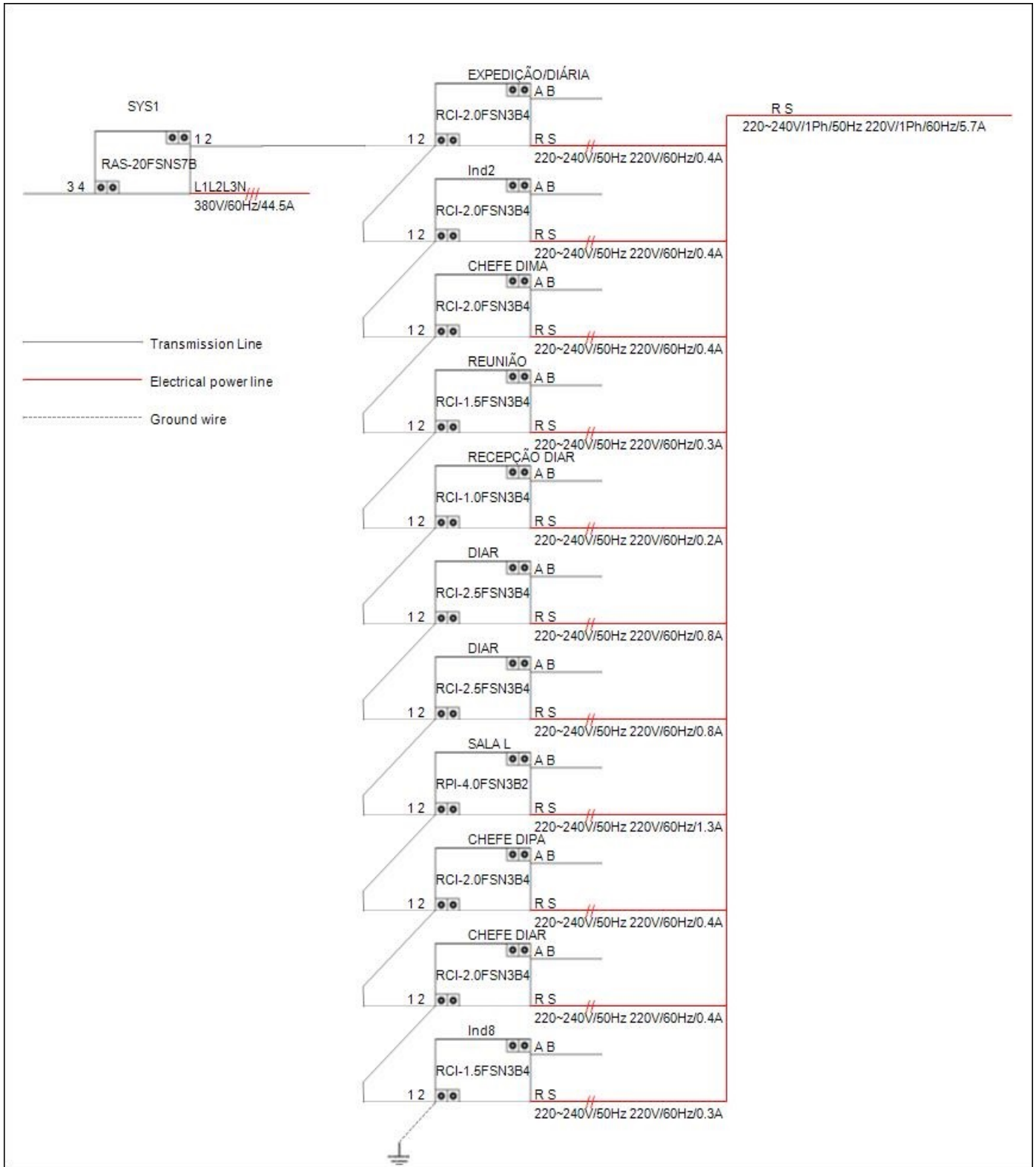


This piping drawing is schematic, please refer to technical catalogue for actual installation !

Liquid Pipe		Gas Pipe	
Diameter (inch)	Equivalent Length (m)	Diameter (inch)	Equivalent Length (m)
1/2	7.0	1/2	21.0
5/8	20.0	5/8	84.0
1/4	56.0	3/4	21.0
3/8	77.0	7/8	7.0
		1	7.0
		1 1/8	20.0

4Wiring

4.1 SYS1



5、 Controller

6、 Product List

Basic Information	
Project Name: TCE PE - Edf. Garagem	Sales Engineer Name: Diogo Candido
Sold To:	Region: LA_BR
Location:	

6.1 Indoor Unit List

Indoor Unit Model	Unit Type	Qty	Rated Cooling Capacity	Rated Heating Capacity	PI (Cooling)	Air Flow	Depth	Width	Height	Weight
			kW	kW	W	m ³ /min	inch	inch	inch	kg
RCI-2.0FSN3 B4	Four Way Cassette	5	5.6	6.5	70	17	37.4	37.4	13.2	32
RCI-1.5FSN3 B4	Four Way Cassette	2	4.0	4.8	50	17	37.4	37.4	13.2	31
RCI-1.0FSN3 B4	Four Way Cassette	1	2.8	3.3	30	13	37.4	37.4	13.2	30
RCI-2.5FSN3 B4	Four Way Cassette	2	7.1	8.1	120	23	37.4	37.4	13.2	33
RPI-4.0FSN3 B2	Low Static Ducted	1	11.2	13.0	270	23	22.8	66.9	8.5	58

6.2 Outdoor Unit List

Outdoor Unit Model (Power Supply)	Product Type	Qty	Rated Cooling Capacity	Rated Heating Capacity	PI (Cooling)	MaxPI (Cooling)	Air Flow	Depth	Width	Height	Weight
			kW	kW	kW	kW	m ³ /min	inch	inch	inch	kg
RAS-20FSNS7 B (380V/3Ph/60Hz)	Commercial VRF HP, FSNS 7B	1	56.0	63.0	15.12	16.84	329	30.1	63.0	65.9	350

6.3 Branch Kit

Model	Qty
E-242SNB2	1
E-162SNB2	1
E-102SNB2	8

6.4 Material List

Model	Description	Qty
RCI-2.0FSN3B4	Four Way Cassette	5
RCI-1.5FSN3B4	Four Way Cassette	2
RCI-1.0FSN3B4	Four Way Cassette	1
RCI-2.5FSN3B4	Four Way Cassette	2
RPI-4.0FSN3B2	Low Static Ducted	1
RAS-20FSNS7B	Commercial VRF HP, FSNS7B	1
E-242SNB2	Multi kit	1
E-162SNB2	Multi kit	1
E-102SNB2	Multi kit	8

7、 Product Functions, Features & Benefits

The York/Hitachi VRF units introduced by Johnson Controls are classified as central air-conditioning systems. They are sleek, and suit a sophisticated environment, such as the interior of a five star hotel.

7.1 Features of Outdoor Units

- Energy saving with high EER & IPLV(C)
- Quiet operation with noise down treatments design to reduce vibration and optimize airflow
- High reliability

7.2 Types of Indoor Units

- Mini Four Way Cassette
- Four Way Cassette
- Two Way Cassette
- One Way Cassette
- Compact Ducted
- Slim Ducted
- Low Static Ducted
- Medium Static Ducted
- High Static Ducted
- Duct for Economizer
- Floor Ducted
- Floor Concealed
- Floor Exposed
- Floor Mounted
- Floor Ceiling
- Ceiling Suspended
- High Wall
- Fresh Air
- DOAS

Note: Some indoor unit type may not be available due to different outdoor unit series.

8、 Company Briefing

Johnson Controls is a global diversified technology and industrial leader serving customers in more than 150 countries. Our 142,000 employees create quality products, services and solutions to optimize energy and operational efficiencies of buildings; lead-acid automotive batteries and advanced batteries for hybrid and electric vehicles; and interior systems for automobiles. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat. Through our growth strategies and by increasing market share we are committed to delivering value to shareholders and making our customers successful.

Johnson Controls Building Efficiency delivers products, services and solutions that increase energy efficiency and lower operating costs in buildings for more than one million customers. Operating from 500 branch offices in more than 150 countries, we are a leading provider of equipment, controls and services for heating, ventilating, air-conditioning, refrigeration and security systems. We have been involved in more than 500 renewable energy projects including solar, wind and geothermal technologies. Our solutions have reduced carbon dioxide emissions by 13.6 million metric tons and generated savings of \$7.5 billion since 2000. Many of the world's largest companies rely on us to manage 1.5 billion square feet of their commercial real estate.