


 ICIIC شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit						 شرکت طرح نواندیشان	
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial		Rev
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2	24-Jan-2024	APPROVED FOR DESIGN	H.RASOOLI	H.RASOOLI	R.JAVADZADEH
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REV	DATE	POI	Prepared By	Checked By	Approved By



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AIR HANDLING UNIT									
SITE CONDITION	EXPOSURE :								
	ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
	OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(° C)		
	OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(° C)		
LOCATION :		Process Control Building – HVAC ROOM							
TAG NO. :		CON-AHU-101							
MIXING BOX WITH PRE-FILTER	QTY :		1						
	AHU TYPE :		HORIZONTAL						
	SUPPLY AIR :		13,593	(CFM)	6,415		(L/s)		
	RETURN AIR :		9,485	(CFM)	4,476		(L/s)		
	FRESH AIR :		4,109	(CFM)	1,939		(L/s)		
	EXHAUST AIR (FROM AHU) :		0	(CFM)	0		(L/s)		
DAMPER	FRESH AIR	DAMPER TYPE :			MOTORIZED				
		BLADE TYPE :			OPPESED				
	SUPPLY AIR	DAMPER TYPE :			MOTORIZED				
		BLADE TYPE :			OPPOSED				
	RETURN AIR	DAMPER TYPE :			MOTORIZED				
		BLADE TYPE :			OPPOSED				
FILTER	1ST. BED :ALUMINUM-WASHABLE	DIFFERENTIAL PRESSURE SWITCH :			REQUIRED				
		EFFICIENCY :			30%				
		MAX. AIR PRESSURE DROP : *			(*)	(IN. W.G.)	(*)	(Pa)	
		FACE AREA : *			(*)	(SQ Ft)	(*)	(SQ m)	
		FRAME MATERIAL :			STAINLESS STEEL 316L				
		RAILS MATERIAL :			STAINLESS STEEL 316L				
		NO OF LAYERS :			5				
		WASHABLE FILTER ARRANGEMENT :			V-TYPE				
	2ND. BED :PLEATED	DIFFERENTIAL PRESSURE SWITCH :			REQUIRED				
		EFFICIENCY :			45-50%				
		MAX. AIR PRESSURE DROP : *			0.6	(IN. W.G.)	150	(Pa)	
		FACE AREA : *			(*)	(SQ Ft)	(*)	(SQ m)	
		FRAME :			STAINLESS STEEL 316L				
	3RD. BED :BAG	DIFFERENTIAL PRESSURE SWITCH :			REQUIRED				
		EFFICIENCY :			90%				
		MAX. AIR PRESSURE DROP : *			1	(IN. W.G.)	250	(Pa)	
		FACE AREA : *			(*)	(SQ Ft)	(*)	(SQ m)	
FRAME :			STAINLESS STEEL 316L						

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AIR HANDLING UNIT											
SUPPLY FAN DATA	NO. OF FAN (DUTY/STAND BY) : *		2 (1 DUTY + 1 STANDBY)								
	FAN DIRECTION :		FRONT DISCHARGE								
	FAN SIZE : *		40	(IN)	1,000	(MM)					
	TOTAL AIR FLOW :		13,593	(CFM)	6,415	(L/s)					
	AIR FLOW FOR EACH FAN : *		13,593	(CFM)	6,415	(L/s)					
	INTERNAL STATIC PRESSURE : *		2.35	(IN. W.G.)	600	(Pa)					
	EXTERNAL STATIC PRESSURE :		2.21	(IN. W.G.)	400	(Pa)					
	TOTAL STATIC PRESSURE : *		4.56	(IN. W.G.)	1,000	(Pa)					
	FAN BLADE TYPE :		BACKWARD								
	FAN IMPELLER MATERIAL :		CARBON STEEL								
	FAN HOUSING MATERIAL :		ST37								
	FAN BHP : *		*					(BHP)			
	TIP SPEED : *		MAX 20					(RPM)			
	FAN SOUND LEVEL :		MAX ALLOWABLE NOISE LEVEL AT 1(M) FROM UNIT : 85					(DB)			
	FAN EFFICIENCY : *		MIN 70					(%)			
	DIFFERENTIAL PRESSURE SWITCH :		REQUIRED								
	MOTOR	NUMBER (DUTY/STAND BY) : *		1 (DUTY)+1(STANDBY)							
		FAN CONNECTION TYPE TO ELECTROMOTOR:		BELT DRIVE							
		NO OF BELT : *		(*)							
		BELT TYPE : *		(*)							
		BEARING TYPE :		PILLOW BLOCK							
		LUBRICANT PORT FOR BEARING : *		(*)							
		PROTECTION DEGREE :		IP55							
		INSULATION CLASS :		F							
		RPM : *		MAX(1480)							
		TOTAL POWER INPUT:		25	(HP)	18.5	(KW)				
		CONTROL SYSTEM:		-							
		400		(VOLT)	3	(PH)	50	(CYC)			
COOLING COIL	TOTAL COOLING LOAD :		463	(MBH)	135.8	(KW)					
	SENSIBLE COOLING LOAD :		407	(MBH)	119.2	(KW)					
	ENTERING AIR DB / WB TEMP. :		90.1 / 66.2	(° F)	32.3 / 19	(° C)					
	LEAVING AIR DB / WB TEMP. :		56.1/ 54	(° F)	13.4 / 12.2	(° C)					
	EVAPORATING TEMP : *		MAX.	45	(° F)	7.2	(° C)				
	ADP : *		51.6	(° F)	10.9	(° C)					
	REFRIGERANT TYPE :		R134a								
	NO OF COIL : *		(*)								

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AIR HANDLING UNIT										
COOLING COIL	COIL FACE AREA : *			(*)		(SQ Ft)	(*)		(SQ. M)	
	COIL VELOCITY :			MAX.	500	FPM	2.54		MPS	
	COIL HEAT TREANSFER AREA : *			(*)		(SQ Ft)	(*)		(SQ. M)	
	MAX. AIR PRESSURE DROP : *			(*)		(IN.W.G.)	(*)		(Pa)	
	FIN TYPE : *			CORRUGATED						
	FINS PER INCH : *			MAX. 10					FPI	
	FINS THICKNESS : *			MIN. 0.0059		(IN.)	MIN. 0.15		(MM)	
	NO.OF ROWS : *			(*)		CIRCUITING : FULL				
	DIFFERENTIAL PRESSURE TRANSMITTER:			REQUIRED						
	COIL BY PASS FACTOR : *			0.1						
	TUBE SHEET ARRANGEMENT : *			TRIANGLE ARRANGEMENT						
	TUBE MATERIAL :			SEAMLESS COPPER						
	TUBE THICKNESS : *			MIN. 0.014 (IN)						
	FIN MATERIAL :			ALUMINIUM (WITH CORROSION PROTECTION)						
	ANTI CORROSION COATING :			BLYGOLD / HERESITE						
ANTI FREEZE PROTECTION :			REQUIRED							
HEATING COIL	TOTAL HEATING LOAD :			158.4		(MBH)	46.4		(KW)	
	ENTERING/LEAVING AIR DB TEMP. :			56.7 /69.8		(° F)	13.7/21		(° C)	
	AIR PRESSURE DROP (WORKING):*					(IN.W.G.)			(Pa)	
	AIR PRESSURE DROP (DESIGN) :			(*)		(IN.W.G.)	(*)		(Pa)	
	FIN TYPE :			CORRUGATED						
	FINS PER INCH :			MAX : 10		FPI	NO. OF ROW :		(*)	
	FINS THICKNESS :			MIN :0.0059		(IN.)	MIN : 0.15		(MM)	
	FIN MATERIAL :			STAINLESS STEEL						
	COIL BY PASS FACTOR : *			0.1						
	COIL FACE AREA :			(*)		(SQ Ft)	(*)		(SQ. M)	
	TUBE MATERIAL :			STAINLESS STEEL						
	TUBE THICKNESS : *			MIN. 0.014 (IN)		(IN.)	MIN : 0.35		(MM)	
	HOT WATER	H.W INLET/OUTLET TEMP. :			180 / 160		(° F)	82 / 71		(° C)
		H.W FLOW :			15.8		(GPM)	1.0		(L/s)
		HOT WATER VELOCITY :*					(FPS)	0		(MPS)
		H.W MAX. PRESSURE DROP:			(*)		(Ft.W.G.)	(*)		(KPa)
		NO. OF CIRCUIT : *					CIRCUITING :			
		COIL BY PASS FACTOR : *			0.1					
ELECTRICAL AND CONTROL PANEL	ELECTRICAL AND CONTROL PANEL :				REQUIRED					
	ELECTRICAL AND CONTROL PANEL TYPE :				CENTRAL-REMOTE FLOOR MOUNTED					
	ELECTRICAL AND CONTROL PANEL PROTECTION CLASS :				IP42					
	PACKAGED UNIT ENCLOSURE :				DOUBLE SKIN					

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AIR HANDLING UNIT										
CASING	UNIT CHASSIS MATERIAL , THICKNESS :				ALUMINIUM			4	(MM)	
	UNIT BOTTOM PLATE MATERIAL :				GALVANIZED			2	(MM)	
	DRAIN PAN MATERIAL/THICKNESS :				PP			2	(MM)	
	EXTERNAL PANEL	MATERIAL : GALVANIZED								
		THICKNESS :				1.5				(MM)
		INSULATION / THICKNESS :				POLYURETHANE			50	(MM)
		COATING THICKNESS :	PRIMARY			70		MICRON		
			INTERMEDIATE			100		MICRON		
			FINAL			70		MICRON		
		RAL SPECIFICATION : *	CASING			(*)				
			BODY			(*)				
		INTERNAL PANEL	MATERIAL : *				(*)			
	THICKNESS :				1.5				(MM)	
	COATING THICKNESS :		PRIMARY			70		MICRON		
			INTERMEDIATE			100		MICRON		
			FINAL			70		MICRON		
	PERFORATED FAN SECTION INTERNAL PANEL : REQUIRED									

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AIR HANDLING UNIT			
PHYSICAL DATA	OVERALL HEIGHT (*)	(*)	(MM)
	OVERALL LENGTH (*)	(*)	(MM)
	OVERALL WIDTH (*)	(*)	(MM)
	OPERATING WEIGHT (*)	(*)	(KG)
* SHALL BE COMPLETED / FINALIZED BY VENDOR.			

REMARKS :



- 1- PACKAGED UNIT SHALL BE DESIGNED AND MANUFACTURED TO OPERATE FOR YEAR AROUND.
- 2- INTERNAL PRESSURE DROP AND TOTAL PRESSURE DROP SHALL BE FINALIZED BY VENDOR.

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AIR COOLED CONDENSING UNIT											
SITE CONDITION	EXPOSURE :										
	ALTITUDE (ABOVE SEA LEVEL) :			5,528	(Ft)	1,685			(M)		
	OUTDOOR DESIGN DB. TEMP. :			122	(°F)	50.0			(°C)		
	OUTDOOR DESIGN WB. TEMP:			77	(°F)	25.0			(°C)		
LOCATION :	Process Control Building – ROOF										
TAG NO. :	CON-ACC-01A/B										
NUMBER OF CONDENSER :	1(DUTY) + 1(STANDBY)										
AIR-COOLED CONDENSER	TOTAL HEAT REJECTION : *			463	(MBH)	136			(KW)		
	CONDENSING TEMP. : *			144	(° F)	62.2			(° C)		
	TEMP. DIFFERENCE (TD) :			MAX. 18	(° F)	MAX. 10			(° C)		
	COIL	NO. OF CIRCUIT : *			(*)	CIRCUITING : *			HALF		
		NO OF COIL FOR EACH CIRCUIT : *				TOTAL NO OF COIL : *			(*)		
		NO. OF ROWs : *			(*)	FINS PER INCH :			MAX. 10		
		COIL FACE AREA* :			(*)	(SQ.FT)	(*)			(SQ.M)	
		COIL VELOCITY :			MAX. 550	(FPM)	2.8			(M/S)	
		CONDENSER COIL ARRANGEMENT :*			V TYPE						
		MAX. AIR PRESSURE DROP :			(*)	(IN.W.G.)	(*)			(Pa)	
		FIN THICKNESS : *			MIN. 0.006	(IN)	MIN. 0.15			(MM)	
		FIN MATERIAL :			ALUMINIUM						
		TUBE SIZE : *			(*)	(IN)	(*)			(MM)	
		TUBE THICKNESS : *			(*)	(IN)	(*)			(MM)	
		TUBE MATERIAL :			SEAMLESS COOPER						
		PRESSURE RELIEF VALVE :			REQUIRED						
		COATING HEAT TRANSFER CORRECTION FACTOR :			5%						
	ANTI CORROSION COATING :			BLYGOLD / HERESITE							
	FAN	QUANTITY(FOR EACH) : *			8	TYPE :	AXIAL, ROTOREX				
		NO F FAN FOR EACH CIRCUIT : *			1						
		CLASS :			F	FAN DIA. : *	31.9	(IN)	810	(MM)	
		TOTAL AIR FLOW : *			(*)	(CFM)	(*)			(L/S)	
		FAN EFFICIENCY:			MIN. 75	(%)					
		FAN SPEED :			MAX. 900					(RPM)	
		ALLOWABLE NOISE LEVEL AT 1(M) FROM UNIT :			MAX. 85					(DB)	
		FAN FRAME MATERIAL : *			(*)						
		FAN IMPELLER MATERIAL : *			(*)						
		FAN HOUSING MATERIAL : *			(*)						
PROTECTION DEGREE :			IP55								
TOTAL ELEC. POWER INPUT : *			12.86	(HP)	10			(KW)			
			400	(VOLT)	3	(PH.)	50	(CYC)			

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AIR COOLED CONDENSING UNIT									
COMPRESSOR	TYPE :			SEMI-HERMETIC RECIPROCATING		QUANTITY : *		2	
	TOTAL REFRIGERANT CHARGE* :			(*)		(Lb)	(*)		(Kg)
	SUPER HEAT TEMP(MAX) :			10		(° F)	5.5		(° C)
	SUBCOOLING TEMP(MAX) :			7		(° F)	3.8		(° C)
	INSULATION CLASS :			F					
	PROTECTION DEGREE :			IP55					
	LIQUID INJECTION :			REQUIRED					
	OIL LEVEL SWITCH :			REQUIRED					
	OIL HEATER :			REQUIRED					
	SIGHT GLASS :			REQUIRED					
	SUCTION VALVE :			REQUIRED					
	DISCHARGE VALVE :			REQUIRED					
	TOTAL ELEC. POWER INPUT : *			2*38.5		(HP)	2*28.3		(KW)
	400		(VOLT)	3		(PH)	50		(CYC)
CAPACITY REDUCTION :			(% FULL CIRCUIT)						
REFRIGERATION EQUIPMENT	EXPANSION VALVE TYPE :				ELECTRONIC				
	ANTI FREEZ PROTECTION :				REQUIRED				
	ACCUMULATOR :				REQUIRED				
	ACCUMULATOR WITH HEAT EXCHANGER :				REQUIRED				
	RECEIVERS TANK :				REQUIRED				
	OIL SEPARATOR :				REQUIRED				
	SOLENOID VALVE FOR EACH CIRCUIT :				REQUIRED				
	FILTER DRIER FOR EACH CIRCUIT :				REQUIRED				
	SIGHT GLASS FOR EACH CIRCUIT :				REQUIRED				
	SERVICE VALVE FOR EACH CIRCUIT :				REQUIRED				
	SUCTION PRESSURE GUAGE FOR EACH CIRCUIT :				REQUIRED				
	DISCHARGE PRESSURE GUAGE FOR EACH CIRCUIT :				REQUIRED				
	OIL PRESSURE GUAGE FOR EACH CIRCUIT :				REQUIRED				
	YEAR ROUND OPERATION :				REQUIRED				
ELECTRICAL AND CONTROL PANEL	ELECTRICAL AND CONTROL PANEL :				REQUIRED				
	ELECTRICAL AND CONTROL PANEL TYPE :				CENTRAL-REMOTE FLOOR MOUNTED				
	ELECTRICAL AND CONTROL PANEL PROTECTION CLASS :				IP65				

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AIR COOLED CONDENSING UNIT										
CASING	PACKAGED UNIT ENCLOSURE :				DOUBLE SKIN					
	UNIT CHASIS MATERIAL , THICKNESS :CARBON STEEL(STANDARD PROFILE)				CARBON STEEL(STANDARD PROFILE)					
	UNIT BOTTOM PLATE MATERIAL :				GALVANIZED			2	(MM)	
	EXTERNAL PANEL	MATERIAL :		GALVANIZED						
		THICKNESS :		1.5						(MM)
		COATING THICKNESS :	PRIMARY		70		MICRON			
			INTERMEDIATE		100		MICRON			
			FINAL		70		MICRON			
		RAL SPECIFICATION : *	CASING		(*)					
	BODY		(*)							
PERFORATED FAN SECTION INTERNAL PANEL :				REQUIRED						
PHYSICAL DATA	OVERALL HEIGHT (*)			(*)			(MM)			
	OVERALL LENGTH (*)			(*)			(MM)			
	OVERALL WIDTH (*)			(*)			(MM)			
	OPERATING WEIGHT (*)			(*)			(KG)			
* SHALL BE COMPLETED / FINALIZED BY VENDOR.										



REMARKS :



1- PACKAGED UNIT SHALL BE DESIGNED AND MANUFACTURED TO OPERATE FOUR YEAR AROUND.

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CONDENSING BOILER							
SITE CONDITION	ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)
LOCATION :	PROCESS CONTROL BUILDING NO.03 - MECHANICAL ROOM						
TAG NO. :	CON-BO-101, CON-BO-102			Quantity	2(ONE AS STANBY)		
BOILER TYPE :	CONDENSING BOILER						
FUEL TYPE :	<input checked="" type="checkbox"/> NATURAL GAS		<input type="checkbox"/> FUEL OIL		<input type="checkbox"/> NATURAL GAS & FUEL OIL		
BOILER RATING	MAX. HEATING CAPACITY :		500	(MBH)	147		(KW)
	OPERATING PRESSURE :		58	(Psi)	4		(Bar)
FUEL CONSUMPTION	NATURAL GAS FLOW RATE :		696	(CFH)	20		(M ³ /Hr)
	FUEL OIL FLOW RATE :		-	(GPH)	-		(THERMS)
	MINIMUM REGULATED GAS PRESSURE :		0.25	(Psi)	0.0172		(Bar)
BURNER * POWER CONSUMPTION	NO. OF STAGES :		(*)				
	BLOWER MOTOR :		(*)		(HP)	(*) (KW)	
	OIL PUMP MOTOR :		-		(HP)	- (KW)	
	OIL HEATER :		-		(HP)	- (KW)	
ELECTRIC DATA *	TOTAL POWER INPUT:		(*)		(HP)	(*) (KW)	
	(*) (VOLT)		(*)		(PH)	(*) (CYC)	
HOT WATER DATA	SUPPLY WATER TEMP :		180		(°F)	82.2 (°C)	
	RETURN WATER TEMP :		160		(°F)	71.1 (°C)	
	FLOW RATE :		(*)		(GPM)	(*) (L/s)	
	WATER VOLUME :		(*)		(Gal)	(*) (Lit)	
	BOILER PRESSURE DROP :		(*)		(Ft.W.G)	(*) (KPa)	
BOILER PIPING CONNECTIONS*	SUPPLY WATER :		(*)		(IN)	DRAIN SIZE : (*) (IN)	
	RETURN WATER :		(*)		(IN)	CHIMNEY DIA. : (*) (IN)	
	SAFETY VALVE NO. & DIA. :		*		(IN)		
PHYSICAL DATA*	OVERALL HEIGHT :		(*)		(MM)	CLEARANCE	FRONT : * (MM)
	OVERALL LENGTH :		(*)		(MM)		REAR : * (MM)
	OVERALL WIDTH :		(*)		(MM)		RIGHT SIDE : * (MM)
							LEFT SIDE : * (MM)
	WEIGHT	OPERATING :		(*)		(Kg)	
	SHIPPING :		(*)		(Kg)		
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)							
REMARKS :							
Cast Iron Package Unit should include a suitable expansion tank, burner, domestic hot water generator and all needed safety and control devices.							



[illegible]

[illegible]



 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit						 شرکت طرح نو اندیشان			
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Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev				
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02			
Old Doc No. :	-	Doc No. :		LRP-TNA-HV-19-DSH-0002						
CENTRIFUGAL , IN-LINE CIRCULATING PUMP										
SITE CONDITION	ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)			
LOCATION :	MECH ROOM-DHW RECERCULATION			<input checked="" type="checkbox"/> INDOOR		<input type="checkbox"/> OUTDOOR				
TAG NO. :	CON-PU-107 & CON-PU-108									
FLUID DATA	NAME OF FLUID :		DOMESTIC HOT WATER		DUTY :			2x100 (ONE DUTY, ONE STANDBY)		
	LIQUID TEMP. :		140		(°F)	60		(°C)		
	SPECIFIC GRAVITY :		1							
	VISCOSITY :		0.467		(CP)	@	60	(°C)		
	VAPOR PRESSURE (ABSOLUTE) :		21.8		(Psi)	151		(KPa)		
PUMP DATA	IMPELLER DIA. :		*		(IN)	*		(MM)		
	PUMP SPEED :		1450 (*)		(RPM)	EFFICIENCY :		70 (*)		
	SPECIFIC SPEED :		*		(RPM)	PUMP BHP :		(*)		
	MAX. HEAD :		14		(Ft)	4.3		(M)		
	FLOW RATE :		1.1		(GPM)	0.2		(M³/Hr)		
	NPSHR : ★		*		(Ft)	*		(M)		
	NPSHA : ★		*		(Ft)	*		(M)		
	NOISE :		MAX 85 (AT 1 METER)		(DB)					
NOZZLE CONNECTION	SUCTION DIA. :		*		(IN)	*		(MM)		
	DISCHARGE DIA. :		*		(IN)	*		(MM)		
ELECTRICAL DATA*	TOTAL ELEC. POWER INPUT :		0.09*		(KW)	0.12*		(HP)		
	230		(VOLT)	1	(PH)	50		(CYC)		
	MOTOR SPEED :		3 SPEED*		(RPM)					
	FULL LOAD AMP. :		*		LOCKED ROTOR AMP. :		*			
PHYSICAL DATA	OVERALL LENGTH :		*		(MM)	CLEARANCE	LEFT SIDE :		*	(MM)
	OVERALL WIDTH :		*		(MM)		RIGHT SIDE :		*	(MM)
	OVERALL HEIGHT :		*		(MM)		FRONT SIDE :		*	(MM)
	TOTAL OPERATING WEIGHT :		*		(Kg)		REAR SIDE :		*	(MM)
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)										
REMARKS :										

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Old Doc No. :	-	Doc No. :			LRP-TNA-HV-19-DSH-0002			
CENTRIFUGAL FAN								
SITE CONDITION	EXPOSURE :							
	ALTITUDE :		5526.8	(ft)	1685	(m)		
	OUTDOOR DESIGN DBT :		122	(° F)	50.0	(° C)		
GENERAL DATA	TAG NO. :		CON-EX-101A,B		TYPE :	SINGLE WIDTH SINGLE INLET		
	QUANTITY :		2	(1 DUTY & 1 STANDBY)				
	LOCATION :		Battery Room(ON ROOF)					
	EMPLACEMENT :		OUTDOOR		HAZARD AREA :		NO	
	FLUID :		Air		FLUID TEMPERATURE :		50	(°C)
	EXPLOSION PROOF :		YES		EX. PROOF CLASS :		Exe IIC T3	
CONFIGURATION	FAN BLADE TYPE :		BACKWARD CURVED					
	POWER TRANSMISSION :		BELT DRIVE					
	ROTATE DIRECTION :		ONE COUNTER CLOCKWISE ONE CLOCKWISE					
	DISCHARGE DIRECTION :		HORIZONTAL DISCHARGE					
	DISCHARGE TYPE :		FREE DISCHARGE					
	NUMBER OF BELT:		1					
FAN DATA	AIR FLOW :		604	(CFM)	285	(l/s)		
	TOTAL STATIC PRESSURE :		0.86	(in.w.g.)	215	(Pa)		
	FAN SIZE :		(*)	(in)	(*)	(mm)		
	INLET/OUTLET AREA :		(*)	(ft2)	(*)	(m2)		
	MAX. OUTLET VELOCITY :		(*)	(fpm)	(*)	(m/s)		
	TIP SPEED* :		(*)	(fpm)	(*)	(m/s)		
	MAX FAN SPEED* :		1450	(RPM)	FAN EFFICIENCY* :		75(min)	(%)
	SOUND LEVEL @ 1m		80	(DB)	FAN BHP :		0.1	
	BEARING TYPE :		PILLOW BLOCK		NO. OF SHEAVE :		(*)	



CENTRIFUGAL FAN						
MOTOR DATA	MAX MOTOR SPEED :	1450		(RPM)		
	FULL LOAD AMP. :	(*)		(A)		
	IP :	55		INSULATION CLASS :		F
	TOTAL POWER INPUT :	0.75*		(HP)		0.55* (kW)
	400	(VOLT)	3	(PH)	50	(CYC)
MATERIAL	HOUSING MATERIAL :	(*)		IMPELLER MATERIAL :		(*)
	SHAFT MATERIAL :	(*)		CHASSIS MATERIAL :		(*)
ACCESSORIES	TERMINAL BOX :		REQUIRED			
	ON/OFF SWITCH :		REQUIRED			
	EMERGENCY SHUT DOWN PUSH BOTTOM :		REQUIRED			
	SHEAVE & PULLEY PROTECTION GUARD :		REQUIRED			
	VIBRATION ISOLATOR :		REQUIRED			
	ACCESS DOOR FOR HOUSING :		REQUIRED			
	BACK DRAFT DAMPER :		REQUIRED			
PHYSICAL DATA*	OVERALL HEIGHT :	(*)	(mm)	OVERALL WIDTH :	(*)	(mm)
	OVERALL LENGTH :	(*)	(mm)	OPERATING WEIGHT :	(*)	(kg)
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)						
REMARKS :						

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CENTRIFUGAL FAN								
SITE CONDITION	EXPOSURE :							
	ALTITUDE :		5526.8	(ft)	1685	(m)		
	OUTDOOR DESIGN DBT :		122	(° F)	50.0	(° C)		
GENERAL DATA	TAG NO. :		CON-EX-102		TYPE :	SINGLE WIDTH SINGLE INLET		
	QUANTITY :		1	(1 DUTY & 0 STANDBY)				
	LOCATION :		W/C. SHOWER AND LOCKER ROOM (ON ROOF)					
	EMPLACEMENT :		OUTDOOR		HAZARD AREA :	NO		
	FLUID :		Air		FLUID TEMPERATURE :	50	(°C)	
	EXPLOSION PROOF :		NO		EX. PROOF CLASS :			
CONFIGURATION	FAN BLADE TYPE :		BACKWARD CURVED					
	POWER TRANSMISSION :		BELT DRIVE					
	ROTATE DIRECTION :		COUNTER CLOCLWISE ROTATION					
	DISCHARGE DIRECTION :		HORIZONTAL DISCHARGE					
	DISCHARGE TYPE :		FREE DISCHARGE					
	NUMBER OF BELT:		1					
FAN DATA	AIR FLOW :		2570	(CFM)	1213	(l/s)		
	TOTAL STATIC PRESSURE :		0.88	(in.w.g.)	220	(Pa)		
	FAN SIZE :		(*)	(in)	(*)	(mm)		
	INLET/OUTLET AREA :		(*)	(ft2)	(*)	(m2)		
	MAX. OUTLET VELOCITY :		(*)	(fpm)	(*)	(m/s)		
	TIP SPEED* :		(*)	(fpm)	(*)	(m/s)		
	MAX FAN SPEED* :		1450	(RPM)	FAN EFFICIENCY* :	75(min)	(%)	
	SOUND LEVEL @ 1m		80	(DB)	FAN BHP :	0.5		
	BEARING TYPE :		PILLOW BLOCK		NO. OF SHEAVE :	(*)		



CENTRIFUGAL FAN						
MOTOR DATA	MAX MOTOR SPEED :	1450		(RPM)		
	FULL LOAD AMP. :	(*)		(A)		
	IP :	55		INSULATION CLASS :		F
	TOTAL POWER INPUT :	2*		(HP)		1.5* (kW)
	400	(VOLT)	3	(PH)	50	(CYC)
MATERIAL	HOUSING MATERIAL :	(*)		IMPELLER MATERIAL :		(*)
	SHAFT MATERIAL :	(*)		CHASSIS MATERIAL :		(*)
ACCESSORIES	TERMINAL BOX :		REQUIRED			
	ON/OFF SWITCH :		REQUIRED			
	EMERGENCY SHUT DOWN PUSH BOTTOM :		REQUIRED			
	SHEAVE & PULLEY PROTECTION GUARD :		REQUIRED			
	VIBRATION ISOLATOR :		REQUIRED			
	ACCESS DOOR FOR HOUSING :		REQUIRED			
	BACK DRAFT DAMPER :		REQUIRED			
PHYSICAL DATA*	OVERALL HEIGHT :	(*)	(mm)	OVERALL WIDTH :	(*)	(mm)
	OVERALL LENGTH :	(*)	(mm)	OPERATING WEIGHT :	(*)	(kg)
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)						
REMARKS :						

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CENTRIFUGAL FAN								
SITE CONDITION	EXPOSURE :							
	ALTITUDE :		5526.8	(ft)	1685	(m)		
	OUTDOOR DESIGN DBT :		122	(° F)	50.0	(° C)		
GENERAL DATA	TAG NO. :		CON-EX-103		TYPE :	SINGLE WIDTH SINGLE INLET		
	QUANTITY :		1	(1 DUTY & 0 STANDBY)				
	LOCATION :		PANTRY EXHAUST (ON ROOF)					
	EMPLACEMENT :		OUTDOOR		HAZARD AREA :		NO	
	FLUID :		Air		FLUID TEMPERATURE :		50	(°C)
	EXPLOSION PROOF :		NO		EX. PROOF CLASS :			
CONFIGURATION	FAN BLADE TYPE :		BACKWARD CURVED					
	POWER TRANSMISSION :		BELT DRIVE					
	ROTATE DIRECTION :		COUNTER CLOCLWISE ROTATION					
	DISCHARGE DIRECTION :		HORIZONTAL DISCHARGE					
	DISCHARGE TYPE :		FREE DISCHARGE					
	NUMBER OF BELT:		1					
FAN DATA	AIR FLOW :		413	(CFM)	195	(l/s)		
	TOTAL STATIC PRESSURE :		0.86	(in.w.g.)	215	(Pa)		
	FAN SIZE :		(*)	(in)	(*)	(mm)		
	INLET/OUTLET AREA :		(*)	(ft2)	(*)	(m2)		
	MAX. OUTLET VELOCITY :		(*)	(fpm)	(*)	(m/s)		
	TIP SPEED* :		(*)	(fpm)	(*)	(m/s)		
	MAX FAN SPEED* :		1450	(RPM)	FAN EFFICIENCY* :		75(min)	(%)
	SOUND LEVEL @ 1m		80	(DB)	FAN BHP :		0.1	
	BEARING TYPE :		PILLOW BLOCK		NO. OF SHEAVE :		(*)	



CENTRIFUGAL FAN							
MOTOR DATA	MAX MOTOR SPEED :	1450		(RPM)			
	FULL LOAD AMP. :	(*)		(A)			
	IP :	55		INSULATION CLASS :		F	
	TOTAL POWER INPUT :	0.75*		(HP)		0.55*	(kW)
	400	(VOLT)	3	(PH)	50	(CYC)	
MATERIAL	HOUSING MATERIAL :	(*)		IMPELLER MATERIAL :		(*)	
	SHAFT MATERIAL :	(*)		CHASSIS MATERIAL :		(*)	
ACCESSORIES	TERMINAL BOX :		REQUIRED				
	ON/OFF SWITCH :		REQUIRED				
	EMERGENCY SHUT DOWN PUSH BOTTOM :		REQUIRED				
	SHEAVE & PULLEY PROTECTION GUARD :		REQUIRED				
	VIBRATION ISOLATOR :		REQUIRED				
	ACCESS DOOR FOR HOUSING :		REQUIRED				
	BACK DRAFT DAMPER :		REQUIRED				
PHYSICAL DATA*	OVERALL HEIGHT :	(*)	(mm)	OVERALL WIDTH :	(*)	(mm)	
	OVERALL LENGTH :	(*)	(mm)	OPERATING WEIGHT :	(*)	(kg)	
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)							
REMARKS :							

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CENTRIFUGAL FAN								
SITE CONDITION	EXPOSURE :							
	ALTITUDE :		5526.8	(ft)	1685	(m)		
	OUTDOOR DESIGN DBT :		122	(° F)	50.0	(° C)		
GENERAL DATA	TAG NO. :		CON-EX-104		TYPE :	SINGLE WIDTH SINGLE INLET		
	QUANTITY :		1	(1 DUTY & 0 STANDBY)				
	LOCATION :		HVAC ROOM EXHAUST (ON ROOF)					
	EMPLACEMENT :		OUTDOOR		HAZARD AREA :		NO	
	FLUID :		Air		FLUID TEMPERATURE :		50	(°C)
	EXPLOSION PROOF :		NO		EX. PROOF CLASS :			
CONFIGURATION	FAN BLADE TYPE :		BACKWARD CURVED					
	POWER TRANSMISSION :		BELT DRIVE					
	ROTATE DIRECTION :		COUNTER CLOCLWISE ROTATION					
	DISCHARGE DIRECTION :		HORIZONTAL DISCHARGE					
	DISCHARGE TYPE :		FREE DISCHARGE					
	NUMBER OF BELT:		1					
FAN DATA	AIR FLOW :		513	(CFM)	242	(l/s)		
	TOTAL STATIC PRESSURE :		0.88	(in.w.g.)	220	(Pa)		
	FAN SIZE :		(*)	(in)	(*)	(mm)		
	INLET/OUTLET AREA :		(*)	(ft2)	(*)	(m2)		
	MAX. OUTLET VELOCITY :		(*)	(fpm)	(*)	(m/s)		
	TIP SPEED* :		(*)	(fpm)	(*)	(m/s)		
	MAX FAN SPEED* :		1450	(RPM)	FAN EFFICIENCY* :		75(min)	(%)
	SOUND LEVEL @ 1m		80	(DB)	FAN BHP :		0.1	
	BEARING TYPE :		PILLOW BLOCK		NO. OF SHEAVE :		(*)	

CENTRIFUGAL FAN						
MOTOR DATA	MAX MOTOR SPEED :	1450		(RPM)		
	FULL LOAD AMP. :	(*)		(A)		
	IP :	55		INSULATION CLASS :		F
	TOTAL POWER INPUT :	0.75*		(HP)		0.55* (kW)
	400	(VOLT)	3	(PH)	50	(CYC)
MATERIAL	HOUSING MATERIAL :	(*)		IMPELLER MATERIAL :		(*)
	SHAFT MATERIAL :	(*)		CHASSIS MATERIAL :		(*)
ACCESSORIES	TERMINAL BOX :		REQUIRED			
	ON/OFF SWITCH :		REQUIRED			
	EMERGENCY SHUT DOWN PUSH BOTTOM :		REQUIRED			
	SHEAVE & PULLEY PROTECTION GUARD :		REQUIRED			
	VIBRATION ISOLATOR :		REQUIRED			
	ACCESS DOOR FOR HOUSING :		REQUIRED			
	BACK DRAFT DAMPER :		REQUIRED			
PHYSICAL DATA*	OVERALL HEIGHT :	(*)	(mm)	OVERALL WIDTH :	(*)	(mm)
	OVERALL LENGTH :	(*)	(mm)	OPERATING WEIGHT :	(*)	(kg)
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)						
REMARKS :						

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DUCT-MOUNTED HOT WATER REHEAT COIL												
SITE CONDITION		EXPOSURE :										
		ALTITUDE (ABOVE SEA LEVEL) :			5,528	(Ft)	1,685			(M)		
		OUTDOOR DESIGN DB. TEMP. :			122	(° F)	50.0			(° C)		
		OUTDOOR DESIGN WB. TEMP:			77	(° F)	25.0			(° C)		
LOCATION :		ON SUPPLY DUCT FOR OFFICES ROOM INN CONTROL BUILDING										
TAG NO. :		CON-REHCOIL-101										
HEATING COIL		AIR FLOW			6315	(CFM)	2,980			(L/S)		
		TOTAL HEATING LOAD :			90	(MBH)	26.4			(KW)		
		ENTERING/LEAVING AIR DB TEMP. :			57.2 / 75	(° F)	14 / 24			(° C)		
		AIR PRESSURE DROP (WORKING):*			(*)	(IN.W.G.)	(*)			(Pa)		
		AIR PRESSURE DROP (DESIGN) :			(*)	(IN.W.G.)	(*)			(Pa)		
		FIN TYPE :			CORRUGATED							
		FINS PER INCH :			MAX : 10	FPI	NO. OF ROW :	(*)				
		FINS THICKNESS :			MIN :0.0059	(IN.)	MIN : 0.15		(MM)			
		FIN MATERIAL :			STAINLESS STEEL							
		COIL BY PASS FACTOR : *			0.1							
		COIL FACE AREA :			(*)	(SQ Ft)	(*)			(SQ. M)		
		TUBE MATERIAL :			STAINLESS STEEL							
		TUBE THICKNESS : *			MIN. 0.014 (IN)	(IN.)	MIN : 0.35		(MM)			
			HOT WATER	H.W INLET/OUTLET TEMP. :			180 / 160	(° F)	82 / 71			(° C)
				H.W FLOW :			9.0	(GPM)	0.6			(L/s)
				HOT WATER VELOCITY :*				(FPS)	0			(MPS)
				H.W MAX. PRESSURE DROP:			(*)	(Ft.W.G.)	(*)			(KPa)
				NO. OF CIRCUIT : *						CIRCUITING :		
				COIL BY PASS FACTOR : *			0.1					



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DUCT-MOUNTED HOT WATER REHEAT COIL			
PHYSICAL DATA	OVERALL HEIGHT (*)	(*)	(MM)
	OVERALL LENGTH (*)	(*)	(MM)
	OVERALL WIDTH (*)	(*)	(MM)
	OPERATING WEIGHT (*)	(*)	(KG)
* SHALL BE COMPLETED / FINALIZED BY VENDOR.			



REMARKS :



- 1- PACKAGED UNIT SHALL BE DESIGNED AND MANUFACTURED TO OPERATE FOR YEAR AROUND.
- 2- INTERNAL PRESSURE DROP AND TOTAL PRESSURE DROP SHALL BE FINALIZED BY VENDOR.



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INDOOR UNIT V.R.F								
ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)		
OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)		
GENERAL DATA	TAG NO.:		CON-VRF.I-01					
	QUANTITY :		4					
	LOCATION :		01-CONTROL ROOM					
DESIGN DATA:	ACTUAL COOLING CAPACITY:	21.6	(KW)	73699		(BTU/h)		
	ACTUAL HEATING CAPACITY:	9	(KW)	30708		(BTU/h)		
	NOMINAL COOLING CAPACITY:	5.6	(KW)	18000		(BTU/h)		
	NOMINAL HEATING CAPACITY:	6.3	(KW)	21500		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:	50*	W	230V /1 Ph / 50HZ				
TYPE & INSTALITION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		4 WAY CASSETTE					
	LOCATION:		INDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (*) , H(*) , L(*) (MM)		OPERATING WEIGHT:		(*) (KG)		
	LINE OD:	LIQUID LINE:	(*) (MM)	VAPOR LINE:		(*) (MM)		
MATERIAL	■CASING: VENDOR STANDARD		■HEATING COIL: VENDOR STANDARD					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■REFRIGERENT PIPING: COPPER					
	■COIL TUBE/FIN: COPPER/COPPER COATED		■DRAINAGE PIPING: VENDOR STANDARD					
ACCESSORIES	■LEAD WIRE AND PLUG		■REMOTE PORTABLE CONTROLLER					
	■HIGH LOW PRESSURE SWITCH							
	■FILTER DRYER							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR .							



 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO.	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev	
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02	Page: 16 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-19-DSH-0002				
INDOOR UNIT V.R.F								
ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)		
OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)		
GENERAL DATA	TAG NO.:		CON-VRF.I-102					
	QUANTITY :		2					
	LOCATION :		03-ENGINEERING ROOM					
DESIGN DATA:	ACTUAL COOLING CAPACITY:	9.6	(KW)	32755		(BTU/h)		
	ACTUAL HEATING CAPACITY:	3.8	(KW)	12966		(BTU/h)		
	NOMINAL COOLING CAPACITY:	4.5*	(KW)	15500*		(BTU/h)		
	NOMINAL HEATING CAPACITY:	5*	(KW)	17000*		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:	40*	W	230V /1 Ph / 50HZ				
TYPE & INSTALITION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		4 WAY CASSETTE					
	LOCATION:		INDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (*) , H(*) , L(*) (MM)		OPERATING WEIGHT:	(*) (KG)			
	LINE OD:	LIQUID LINE:	(*) (MM)	VAPOR LINE:	(*) (MM)			
MATERIAL	■CASING: VENDOR STANDARD		■HEATING COIL: VENDOR STANDARD					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■REFRIGERENT PIPING: COPPER					
	■COIL TUBE/FIN: COPPER/COPPER COATED		■DRAINAGE PIPING: VENDOR STANDARD					
ACCESSORIES	■LEAD WIRE AND PLUG		■REMOTE PORTABLE CONTROLLER					
	■HIGH LOW PRESSURE SWITCH							
	■FILTER DRYER							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR .							



 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO.	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev	
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02	Page: 17 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-19-DSH-0002				
INDOOR UNIT V.R.F								
ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)		
OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)		
GENERAL DATA	TAG NO.:		CON-VRF.I-103					
	QUANTITY :		2					
	LOCATION :		07-MANAGER OFFICE					
DESIGN DATA:	ACTUAL COOLING CAPACITY:	9.3	(KW)	31732		(BTU/h)		
	ACTUAL HEATING CAPACITY:	5.8	(KW)	19790		(BTU/h)		
	NOMINAL COOLING CAPACITY:	4.5*	(KW)	15500*		(BTU/h)		
	NOMINAL HEATING CAPACITY:	5*	(KW)	17000*		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:	40*	W	230V /1 Ph / 50HZ				
TYPE & INSTALITION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		4 WAY CASSETTE					
	LOCATION:		INDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (*) , H(*) , L(*) (MM)		OPERATING WEIGHT:	(*) (KG)			
	LINE OD:	LIQUID LINE:	(*) (MM)	VAPOR LINE:	(*) (MM)			
MATERIAL	■CASING: VENDOR STANDARD		■HEATING COIL: VENDOR STANDARD					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■REFRIGERENT PIPING: COPPER					
	■COIL TUBE/FIN: COPPER/COPPER COATED		■DRAINAGE PIPING: VENDOR STANDARD					
ACCESSORIES	■LEAD WIRE AND PLUG		■REMOTE PORTABLE CONTROLLER					
	■HIGH LOW PRESSURE SWITCH							
	■FILTER DRYER							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR .							



 شرکت سرمایه گذاری صنایع پتروشیمی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO.	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev	
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02	Page: 18 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-19-DSH-0002				
INDOOR UNIT V.R.F								
ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)		
OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)		
GENERAL DATA	TAG NO.:		CON-VRF.I-104					
	QUANTITY :		1					
	LOCATION :		08-SUPERVISER ROOM					
DESIGN DATA:	ACTUAL COOLING CAPACITY:	6.1	(KW)	20813		(BTU/h)		
	ACTUAL HEATING CAPACITY:	3.8	(KW)	12966		(BTU/h)		
	NOMINAL COOLING CAPACITY:	7.1*	(KW)	24000*		(BTU/h)		
	NOMINAL HEATING CAPACITY:	8*	(KW)	27000*		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:	60*	W	230V /1 Ph / 50HZ				
TYPE & INSTALITION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		4 WAY CASSETTE					
	LOCATION:		INDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (*) , H(*) , L(*) (MM)		OPERATING WEIGHT:	(*) (KG)			
	LINE OD:	LIQUID LINE:	(*) (MM)	VAPOR LINE:	(*) (MM)			
MATERIAL	■CASING: VENDOR STANDARD		■HEATING COIL: VENDOR STANDARD					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■REFRIGERENT PIPING: COPPER					
	■COIL TUBE/FIN: COPPER/COPPER COATED		■DRAINAGE PIPING: VENDOR STANDARD					
ACCESSORIES	■LEAD WIRE AND PLUG		■REMOTE PORTABLE CONTROLLER					
	■HIGH LOW PRESSURE SWITCH							
	■FILTER DRYER							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR .							

 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO.	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev	
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02	Page: 19 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-19-DSH-0002				
INDOOR UNIT V.R.F								
	ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)	
	OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)	
	OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)	
GENERAL DATA	TAG NO.:		CON-VRF.I-105					
	QUANTITY :		1					
	LOCATION :		09-ENGINEERING ROOM					
DESIGN DATA:	ACTUAL COOLING CAPACITY:	6.5	(KW)	22178		(BTU/h)		
	ACTUAL HEATING CAPACITY:	4.8	(KW)	16378		(BTU/h)		
	NOMINAL COOLING CAPACITY:	7.1*	(KW)	24000*		(BTU/h)		
	NOMINAL HEATING CAPACITY:	8*	(KW)	27000*		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:	60*	W	230V /1 Ph / 50HZ				
TYPE & INSTALITION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		4 WAY CASSETTE					
	LOCATION:		INDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (*) , H(*) , L(*) (MM)		OPERATING WEIGHT:	(*) (KG)			
	LINE OD:	LIQUID LINE:	(*) (MM)	VAPOR LINE:	(*) (MM)			
MATERIAL	■CASING: VENDOR STANDARD		■HEATING COIL: VENDOR STANDARD					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■REFRIGERENT PIPING: COPPER					
	■COIL TUBE/FIN: COPPER/COPPER COATED		■DRAINAGE PIPING: VENDOR STANDARD					
ACCESSORIES	■LEAD WIRE AND PLUG		■REMOTE PORTABLE CONTROLLER					
	■HIGH LOW PRESSURE SWITCH							
	■FILTER DRYER							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR .							

 شرکت سرمایه گذاری مناطق تجاری ایران IRAN TO MEDICAL INDUSTRIES INVESTMENT CO	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان
	Process Control Building No.03 HVAC Equipment Data Sheets							
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev	
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	02	Page: 20 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-19-DSH-0002				
OUTDOOR UNIT V.R.F								
ALTITUDE (ABOVE SEA LEVEL) :		5,528	(Ft)	1,685		(M)		
OUTDOOR DESIGN DB. TEMP. :		122	(° F)	50.0		(C°)		
OUTDOOR DESIGN WB. TEMP:		77	(° F)	25.0		(C°)		
GENERAL DATA	TAG NO. :		CON-VRF.O-101A/B					
	QUANTITY :		2(ONE AS STANDBY)					
	LOCATION :		ROOF					
	REFRIGERANT TYPE:		R410a					
	NOMINAL COOLING CAPACITY:	52*	(KW)	177000*		(BTU/h)		
	NOMINAL HEATING CAPACITY:	63*	(KW)	215000*		(BTU/h)		
	FAN AIR FLOW RATE (m3/hr)		(*)					
	ELECTRICAL:-	18.5*	KW	230V /1 Ph / 50HZ				
TYPE & INSTALATION	AREA CLASSIFICATION		NON-HAZARDOUS AREA					
	TYPE:		VRV IVS					
	LOCATION:		OUTDOOR					
MANUFACTURER NAME & MODEL / SIZE & WEIGHT	NAME/MODEL		(*)					
	SIZE:	W (") , H (") , L (") (MM)		OPERATING WEIGHT:		(*) (KG)		
	LINE OD:	LIQUID LINE:	(") (MM)	VAPOR LINE:		(*) (MM)		
MATERIAL	■CASING: VENDOR STANDARD		■REFRIGERENT PIPING: COPPER					
	■COIL FRAME: HOT DIPPED GALVANIZED STEEL		■COMPRESSOR: VENDOR STANDARD					
	■COIL TUBE/FIN: COPPER/COPPER COATED							
ACCESSORIES	■LEAD WIRE AND PLUG							
	■HIGH LOW PRESSURE SWITCH							
INSULATION & FINISHING	INSULATION (REF. PIPING)		THERMAL					
	UNIT SURFACE		VENDOR STANDARD					
REMARKS	1. ITEMS MARKED * TO BE VERIFIED / FILLED IN BY VENDOR 2. EQUIPMENT OUTLINE DRAWINGS WITH PLAN AND SECTIONAL VIEW SHALL BE SUBMITTED. 3. ALL INTERCONNECTING REFRIGERANT PIPING, INSULATION AND ELECTRICAL WIRING WORK BETWEEN INDOOR AND OUTDOOR UNIT SHALL BE INCLUDED IN VENDOR'S SCOPE OF WORK. 4.DRAINAGE PIPING FROM INDOOR UNIT SHALL BE INSTALLED BY VENDOR . 5- THE OUTDOOR UNIT SHALL BE ABLE TO BE COUPLED WITH ANOTHER OUTDDOR UNIT.							

 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO		Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit						 شرکت طرح نوآندیشان	
		Fire Station No.2 HVAC Equipment Data Sheets							
		Pro. Cod	Cons.	Discipline	Unit	Type	Serial		Rev
Contract No.: 6258		LRP	TNA	HV	19	DSH	0002	02	Page: 21 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-15-DSH-0002					
DOMESTIC HOT WATER GENERATOR									
SITE CONDITION	EXPOSURE :								
	ALTITUDE :		5,528		(ft)	1,685		(m)	
	OUTDOOR DESIGN DBT :		122		(°F)	50.0		(°C)	
LOCATION :		MECH ROOM ON ROOF							
TAG NO. :		CON-DHWG-101							
CAPACITY	TANK VOLUME :		79		(Gal.)	300		(Lit.)	
	RECOVERY HEATING CAPACITY :		45000		(BTU/Hr)	13.2		(KW)	
DOMESTIC WATER SIDE	WATER FLOW RATE :		54		(GPH)	0.55		(L/s)	
	ENTERING WATER TEMP. :		40		(° F)	4.4		(° C)	
	LEAVING WATER TEMP. :		140		(° F)	60		(° C)	
HEATING WATER SIDE	REQUIRED HEATING ENERGY :		45000		(BTU/Hr)	13.2		(KW)	
	WATER FLOW RATE :		4.5		(GPM)	0.3		(L/s)	
	ENTERING WATER TEMP. :		180		(° F)	82.2		(° C)	
	LEAVING WATER TEMP. :		160		(° F)	71.1		(° C)	
PIPE CONNECTION*	DOMESTIC WATER IN :		(*)		(IN)	(*)		(MM)	
	DOMESTIC WATER OUT :		(*)		(IN)	(*)		(MM)	
	HEATING WATER IN :		(*)		(IN)	(*)		(MM)	
	HEATING WATER OUT :		(*)		(IN)	(*)		(MM)	
	PRESSURE,TEMP. RELIEF VALVE :		According to ASME code						
	DRAIN OF TANK :		(*)		(IN)	(*)		(MM)	
PHYSICAL DATA*	TANK DIAMETER :		(*)		(IN)	(*)		(MM)	
	TANK HEIGHT :		(*)		(IN)	(*)		(MM)	
	TUBE BUNDLE WITHDRAWAL LENGTH :		(*)		(IN)	(*)		(MM)	
	OPERATING WEIGHT :		(*)		(Lb)	(*)		(Kg)	
	SHIPPING WEIGHT :		(*)		(Lb)	(*)		(Kg)	
	CLEARANCE	REAR SIDE :		(*)		(MM)			
		FRONT SIDE :		(*)		(MM)			
		UP SIDE :		(*)		(MM)			
		BOTTOM SIDE :		-		(MM)			

 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO		Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit						 شرکت طرح نوآندیشان	
		Fire Station No.2 HVAC Equipment Data Sheets							
		Pro. Cod	Cons.	Discipline	Unit	Type	Serial		Rev
Contract No.: 6258		LRP	TNA	HV	19	DSH	0002	02	Page: 21 of 22
Old Doc No.	-	Doc No. :		LRP-TNA-HV-15-DSH-0002					
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)									
REMARKS :									

 شرکت سرمایه گذاری صنایع شیمیایی ایران IRAN CHEMICAL INDUSTRIES INVESTMENT CO	Completing the Remaining Documents of Design and Engineering Services for LAB2 Unit							 شرکت طرح نوآندیشان	
	Fire Station No.2 HVAC Equipment Data Sheets								
	Pro. Cod	Cons.	Discipline	Unit	Type	Serial	Rev		
Contract No.: 6258	LRP	TNA	HV	19	DSH	0002	03	Page: 22 of 22	
Old Doc No.	-	Doc No. :		LRP-TNA-HV-15-DSH-0002					
CLOSED EXPANSION TANK									
SITE CONDITION	EXPOSURE :								
	ALTITUDE :		5,528	(ft)	1,685	(m)			
	OUTDOOR DESIGN DBT :		122	(°F)	50.0	(°C)			
LOCATION :	MECH ROOM ON ROOF								
TAG NO. :	CON-C.EXT-01								
TYPE :	<input type="checkbox"/> AIR / WATER INTERFACE <input checked="" type="checkbox"/> DIAPHRAGM								
SYSTEM TYPE :	<input checked="" type="checkbox"/> HEATING <input type="checkbox"/> COOLING								
GENERAL DATA	TANK VOLUME :		38	(Gal.)	150	(Lit.)			
	MAX. AVERAGE OPERATING TEMP. :		180	(°F)	82.2	(°C)			
	ATMOSPHERIC PRESSURE (ABSOLUTE) :		(*)	(Ft.W.G)	(*)	(Kpa)			
	INITIAL FILL OR MIN.PRESSURE @ TANK :		(*)	(Ft.W.G)	(*)	(Kpa)			
	MAX. OPERATING PRESSURE @ TANK :		(*)	(Ft.W.G)	(*)	(Kpa)			
CONNECTIONS*	SIGHT GLASS :		(*)	(IN)					
	TANK AIR RELEASE FITTING :		(*)	(IN)					
	DRAIN AND AIR CONTROL INLET :		(*)	(IN)					
PHYSICAL DATA*	MIN. VOLUME :		(*)	(M3)	CLEARANCE	LEFT SIDE :		(*)	(MM)
	OVERALL DIAMETER :		(*)	(MM)		RIGHT SIDE :		(*)	(MM)
	OVERALL LENGTH :		(*)	(MM)		UP SIDE :		(*)	(MM)
	TOTAL OPERATING WEIGHT :		(*)	(Kg)		BOTTOM SIDE :		-	(MM)
* COMPLETED BY VENDOR / HVACR ENGINEER (IF NECESSARY)									