DOC NUMBER: **569-DB7B-MEC-725-001**	CLIENT NUMBER: **PRD-MEC-DSH-014**
CLIENT: **TAKEDA**	
PROJECT: **BURITI EPCVM PROJECT**	

DATA SHEET
WATER COLLED CHILLER
PCH-7B-1 / PCH-7B-2

REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV
0	30/JUL/2021	ISSUED FOR CONSTRUCTION	ASO	LFF	RSP
B	27/APR/2021	90% DD ISSUE	ASO	LFF	RSP
A	08/FEB/2021	30% DD ISSUE	ASO	LFF	MAJ

1. REVISION HISTORY

Rev	Reason For Change
A	ORIGINAL
B	PAGE 03, line 17: unit power demand by vendor
	PAGE 03, line 23: changed temperature from 15.0°C to 11.0°C
	PAGE 03, line 24: changed temperature from 5.0°C to 4.0°C
	PAGE 03, line 25: changed flow rate from 37.8 lps to 36.2 lps
	PAGE 03, line 31: informed number of passes
	PAGE 04, line 12: informed number of passes
	PAGE 05, line 13: excluded from the scope chilled and condensation water flow switches and block valve. Changed protocol communication description
	PAGE 05, line 28: Changed note 6
	PAGE 05, line 32: included note 7
0	ISSUED FOR CONSTRUCTION
	PAGE 03, line 23: changed temperature from 11.0°C to 7.5°C
	PAGE 03, line 25: changed flow rate from 36.2 lps to 76.2 lps
	PAGE 05, line 28: adjusted note 6

NUMBER:	569-DB7B-MEC-725-001	CLIENT NR:	PRD-MEC-DSH-014
TITLE: WATER COOLED CHILLER - PCH-7B-1 / PCH-7B-2		SHEET:	3/5
		REV.:	0

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Process (7B Bld.)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*PCH-7B-1 / PCH-7B-2*
PLANT:	*Hemobrás' site*	***QTY.:***	*2 units*

APPLICABLE TO: ☑ **Proposal** ☐ **Purchase** ☐ **As Built**

PROCESS CONDITIONS:

	GENERAL		
		Required	***To Be Completed By Vendor***
	MANUFACTURER:	*(Note 1)*	
	MODEL:	*(Note 1)*	
	UNITS:	*2*	
	UNIT EFFECTIVE CAPACITY (kW):	*1,055 (300 tons)*	
	REFRIGERANT CHARGE	*(Note 1)*	
	SERVICE RATING:	*1,0*	
	PERFORMANCE OF ONE UNIT		
		Required	***To Be Completed By Vendor***
	PROCESS FLUID:	*Water (Note 6)*	
	REFRIGERANT:	*HFC-134a (Note 5)*	
	ELEVATION ABOVE SEA LEVEL (m):	*13*	
	CAPACITY @ RATED TEMPERATURE (kW)	*1,055 (300 tons)*	
	COEFFICIENT OF PERF @ RATED TEMP (kW/kW):	*(Note 1)*	
	IPLV (kW/kW):	*(Note 1)*	
	UNIT POWER DEMAND (TOTAL - kW):	*(Note 1)*	
	UNIT POWER DEMAND (COMPRESSORS - kW):	*(Note 1)*	
	OVERALL SOUND PRESSURE @ 1M (dBA):	*<85*	
	EVAPORATOR (Note 6)		
		Required	***To Be Completed By Vendor***
	TYPE	*Shell & Tube*	
	ENTERING TEMPERATURE (°C):	*7.5 (Note 6)*	
	LEAVING TEMPERATURE (°C):	*4.0 (Note 6)*	
	NOMINAL FLOW RATE (l/s):	*72.2 (260 m³/h)*	
	MIN/MAX FLOW RATE (l/s):	*(Note 1) / (Note 1)*	
	PRESSURE DROP (kPa g):	*<65*	
	FOULING FACTOR (m².K/kW):	*(Note 1)*	
	SHELL MATERIAL / TUBE MATERIAL:	*Carbon Steel / Copper*	
	CONNECTION SIZE / TYPE:	*(Note 1) / Flanged B16.5*	
	NUMBER OF EVAPORATOR PASSES:	*Odd*	

NUMBER:	569-DB7B-MEC-725-001	CLIENT NR:	PRD-MEC-DSH-014

TITLE

WATER COOLED CHILLER - PCH-7B-1 / PCH-7B-2

SHEET: 4/5

REV.: 0

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Process (7B Bld.)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*PCH-7B-1 / PCH-7B-2*
PLANT:	*Hemobrás' site*	***QTY.:***	*2 units*

APPLICABLE TO: ☑ **Proposal** ☐ **Purchase** ☐ **As Built**

	Required	***To Be Completed By Vendor***
CONDENSER		
TYPE	*Shell & Tube*	
ENTERING TEMPERATURE (°C):	*31.5*	
LEAVINGTEMPERATURE (°C):	*37.0*	
NOMINAL FLOW RATE (l/s):	*57.5 (207 m³/h)*	
MIN/MAX FLOW RATE (l/s):	*(Note 1) / (Note 1)*	
PRESSURE DROP (kPa g):	*<65*	
FOULING FACTOR (m².K/kW):	*(Note 1)*	
SHELL MATERIAL / TUBE MATERIAL:	*Carbon Steel / Copper*	
CONNECTION SIZE / TYPE:	*(Note 1) / Flanged B16.5*	
NUMBER OF CONDENSER PASSES:	*Even*	
ELECTRICAL		
UNIT VOLTAGE (V / F / PH):	*380 / 60 / 3*	
NORMAL OPERATING CURRENT (A):	*(Note 1)*	
MAXIMUM OPERATING CURRENT (A):	*(Note 1)*	
STARTING CURRENT (A):	*(Note 1)*	
STARTING TYPE:	*VFD*	
CONSTRUCTION		
NO. REFRIGERATION CIRCUITS PER UNIT:	*(Note 1)*	
COMPRESSOR TYPE:	*Screw*	
TEST PRESSURE (KPa g):	*(Note 1)*	
UNIT LENGTH (mm):	*(Note 1)*	
UNIT WIDTH (mm):	*(Note 1)*	
UNIT HEIGHT (mm):	*(Note 1)*	
EMPTY MASS WEIGHT (kg):	*(Note 1)*	
OPERATING MASS WEIGHT (kg):	*(Note 1)*	
SHIPPING WEIGHT (kg):	*(Note 1)*	
CODE REQUIREMENTS:	*ASME / AHRI*	

NUMBER:	569-DB7B-MEC-725-001	CLIENT NR:	PRD-MEC-DSH-014

TITLE	SHEET: 5/5
WATER COOLED CHILLER - PCH-7B-1 / PCH-7B-2	REV.: 0

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Process (7B Bld.)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*PCH-7B-1 / PCH-7B-2*
PLANT:	*Hemobrás' site*	***QTY.:***	*2 units*

APPLICABLE TO: ☑ **Proposal** ☐ **Purchase** ☐ **As Built**

	ADDITIONAL REQUIREMENTS	
	MINIMUM CLEARANCES FOR MAINTENACE	
	FRONT (mm):	*(Note 1)*
	BACK (mm):	*(Note 1)*
	RIGHT SIDE - LOOKING TO COMPRESSOR (mm):	*(Note 1)*
	LEFT SIDE - LOOKING TO COMPRESSOR (mm):	*(Note 1)*
	SOUND PRESSURE BETWEEN UNITS (dBA):	*(Note 1)*
	PAINT SPEC.: PRIMER (µm):	*(Note 1)*
	1st COAT (µm):	*(Note 1)*
	2nd COAT (µm):	*(Note 1)*
	TOP COAT (µm):	*(Note 1)*
	TOTAL PAINT THICKNESS (µm):	*(Note 1)*
	ACCESSORIES (Note 4)	
	☑ ***ELECTRICAL PANEL***	☑ ***PLC (PROTOCOL IN ETHERNET AND***
	☐ ***CHILLED WATER FLOW SWITCH***	***COMPATIBLE WITH THE WONDERWARE***
	☐ ***CONDENSED WATER FLOW SWITCH***	***PLATFORM (BMS SYSTEM)).***
	☑ ***ANTI-VIBRATION DEVICE***	
	☐ ***AUTOMATIC BLOCK VALVE***	
	☑ ***ANTI-FREEZE PROTECTION***	
	GENERAL NOTES	
	1) TO BE CONFIRMED BY SUPPLIER.	
	2) COP: COEFICIENT OF PERFORMANCE.	
	3) IPLV: PARTIAL LOAD EFFICIENCY CALCULATED TO ARI STANDARD 550 / 590 EQUATION.	
	4) FOR ADDITIONAL INFORMATION AND SPECIFICATIONS SEE PRD-MEC-TSP-002 - TECHNICAL	
	SPECIFICATION - CHILLERS.	
	5) OTHER REFRIGERANT SHOULD BE PROPOSED, BUT MUST BE HFC TYPE, FREE CHLORINE	
	IN THE COMPOSITION.	
	6) THE SELECTED EQUIPMENT SHOULD BE ABLE TO WORK IN TWO SITUATIONS:	
	A)MINIMUM EFFECTIVE CAPACITY OF 300 TONS, USING WATER, DT = 3.5°C, WATER ENTERING AT 7.5°C AND LEAVING AT 4.0°C.	
	B)MINIMUM EFFECTIVE CAPACITY OF 300 TONS, USING PROPYLENE GLYCOL SOLUTION, DT = 3.5°C, WITH THE SOLUTION	
	ENTERING AT 3.5°C AND LEAVING WITH 0°C.	
	7) FREQUENCY INVERTER CONSIDERED ONLY FOR STARTING, NOT FOR CONTROL.	