DOC NUMBER: **569-DB7A-MEC-725-001**	CLIENT NUMBER: **PRD-MEC-DSH-002**
CLIENT: **TAKEDA**	
PROJECT: **BURITI EPCVM PROJECT**	

DATA SHEET
WATER COLLED CHILLER
CH-7A-1 / CH-7A-2 / CH-7A-3

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 ISSUE
B	PAGE 03, line 6: changed capacity from 400 Tons to 530 Tons
	PAGE 03, line 12: changed refrigerant from R-134A to R-514A
	PAGE 03, line 14: changed capacity from 400 Tons to 530 Tons
	PAGE 03, line 25: changed flow rate from 54.4 lps to 63.3 lps
	PAGE 03, line 31: informed number of passes
	PAGE 04, line 06: changed flow rate from 72.5 lps to 101.4 lps
	PAGE 04, line 12: informed number of passes
	PAGE 04, line 21: changed compressor type from screw to centrifugal
	PAGE 05, line 13: excluded from the scope chilled and condensation water flow switches and automatic block valve. Changed protocol communication description.
	PAGE 05, line 28: included note 6
0	ISSUED FOR CONSTRUCTION

NUMBER:	569-DB7A-MEC-725-001	CLIENT NR:	PRD-MEC-DSH-002

TITLE

WATER COOLED CHILLER - CH-7A-1 / CH-7A-2 / CH-7A-3

SHEET: 3/5

REV.: 0

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Air Conditioning Units (7A and 7B Blds)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*CH-7A-1 / CH-7A-2 / CH-7A-3*
PLANT:	*Hemobrás' site*	***QTY.:***	*3 units*

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

PROCESS CONDITIONS:

1	***GENERAL***		
2		***Required***	***To Be Completed By Vendor***
3	***MANUFACTURER:***	*(Note 1)*	
4	***MODEL:***	*(Note 1)*	
5	***UNITS:***	*3*	
6	***UNIT EFFECTIVE CAPACITY (kW):***	*1,865 (530 tons)*	
7	***REFRIGERANT CHARGE***	*(Note 1)*	
8	***SERVICE RATING:***	*1,0*	
9	***PERFORMANCE OF ONE UNIT***		
10		***Required***	***To Be Completed By Vendor***
11	***PROCESS FLUID:***	*Water*	
12	***REFRIGERANT:***	*R-514A (Note 5)*	
13	***ELEVATION ABOVE SEA LEVEL (m):***	*13*	
14	***CAPACITY @ RATED TEMPERATURE (kW)***	*1,865 (530 tons)*	
15	***COEFFICIENT OF PERF @ RATED TEMP (kW/kW):***	*(Note 1)*	
16	***IPLV (kW/kW):***	*(Note 1)*	
17	***UNIT POWER DEMAND (TOTAL - kW):***	*(Note 1)*	
18	***UNIT POWER DEMAND (COMPRESSORS - kW):***	*(Note 1)*	
19	***OVERALL SOUND PRESSURE @ 1M (dBA):***	*<85*	
20	***EVAPORATOR***		
21		***Required***	***To Be Completed By Vendor***
22	***TYPE***	*Shell & Tube*	
23	***ENTERING TEMPERATURE (°C):***	*12.5*	
24	***LEAVINGTEMPERATURE (°C):***	*5.5*	
25	***NOMINAL FLOW RATE (l/s):***	*63.3 (228 m³/h)*	
26	***MIN/MAX FLOW RATE (l/s):***	*(Note 1) / (Note 1)*	
27	***PRESSURE DROP (kPa g):***	*<65*	
28	***FOULING FACTOR (m².K/kW):***	*(Note 1)*	
29	***SHELL MATERIAL / TUBE MATERIAL:***	*Carbon Steel / Copper*	
30	***CONNECTION SIZE / TYPE:***	*(Note 1) / Flanged B16.5*	
31	***NUMBER OF EVAPORATOR PASSES:***	*3*	

NUMBER:	569-DB7A-MEC-725-001	CLIENT NR:	PRD-MEC-DSH-002
TITLE	WATER COOLED CHILLER - CH-7A-1 / CH-7A-2 / CH-7A-3	SHEET:	4/5
		REV.:	0

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Air Conditioning Units (7A and 7B Blds)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*CH-7A-1 / CH-7A-2 / CH-7A-1*
PLANT:	*Hemobrás' site*	***QTY.:***	*3 units*

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

1	***CONDENSER***		
2		***Required***	***To Be Completed By Vendor***
3	***TYPE***	*Shell & Tube*	
4	***ENTERING TEMPERATURE (°C):***	*31.5*	
5	***LEAVINGTEMPERATURE (°C):***	*37.0*	
6	***NOMINAL FLOW RATE (l/s):***	*101.4 (365 m³/h)*	
7	***MIN/MAX FLOW RATE (l/s):***	*(Note 1) / (Note 1)*	
8	***PRESSURE DROP (kPa g):***	*<65*	
9	***FOULING FACTOR (m².K/kW):***	*(Note 1)*	
10	***SHELL MATERIAL / TUBE MATERIAL:***	*Carbon Steel / Copper*	
11	***CONNECTION SIZE / TYPE:***	*(Note 1) / Flanged B16.5*	
12	***NUMBER OF CONDENSER PASSES:***	*2*	
13	***ELECTRICAL***		
14	***UNIT VOLTAGE (V / F / PH):***	*380 / 60 / 3*	
15	***NORMAL OPERATING CURRENT (A):***	*(Note 1)*	
16	***MAXIMUM OPERATING CURRENT (A):***	*(Note 1)*	
17	***STARTING CURRENT (A):***	*(Note 1)*	
18	***STARTING TYPE:***	*VFD (Note 6)*	
19	***CONSTRUCTION***		
20	***NO. REFRIGERATION CIRCUITS PER UNIT:***	*(Note 1)*	
21	***COMPRESSOR TYPE:***	*Centrifugal*	
22	***TEST PRESSURE (KPa g):***	*(Note 1)*	
23	***UNIT LENGTH (mm):***	*(Note 1)*	
24	***UNIT WIDTH (mm):***	*(Note 1)*	
25	***UNIT HEIGHT (mm):***	*(Note 1)*	
26	***EMPTY MASS WEIGHT (kg):***	*(Note 1)*	
27	***OPERATING MASS WEIGHT (kg):***	*(Note 1)*	
28	***SHIPPING WEIGHT (kg):***	*(Note 1)*	
29	***CODE REQUIREMENTS:***	*ASME / AHRI*	
30			
31			

NUMBER:	**569-DB7A-MEC-725-001**	CLIENT NR:	**PRD-MEC-DSH-002**

TITLE

WATER COOLED CHILLER - CH-7A-1 / CH-7A-2 / CH-7A-3

SHEET: 5/5

REV.: **0**

CLIENT:	*Takeda / Baxalta*	***SERVICE.:***	*Air Conditioning Units (7A and 7B Blds)*
LOCATION:	*Goiana - PE*	***EQUIPMENT TAG:***	*CH-7A-1 / CH-7A-2 / CH-7A-1*
PLANT:	*Hemobrás' site*	***QTY.:***	*3 units*

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

1	***ADDITIONAL REQUIREMENTS***	
2	***MINIMUM CLEARANCES FOR MAINTENACE***	
3	***FRONT (mm):***	*(Note 1)*
4	***BACK (mm):***	*(Note 1)*
5	***RIGHT SIDE - LOOKING TO COMPRESSOR (mm):***	*(Note 1)*
6	***LEFT SIDE - LOOKING TO COMPRESSOR (mm):***	*(Note 1)*
7	***SOUND PRESSURE BETWEEN UNITS (dBA):***	*(Note 1)*
8	***PAINT SPEC.: PRIMER (µm):***	*(Note 1)*
9	***1st COAT (µm):***	*(Note 1)*
10	***2nd COAT (µm):***	*(Note 1)*
11	***TOP COAT (µm):***	*(Note 1)*
12	***TOTAL PAINT THICKNESS (µm):***	*(Note 1)*
13	***ACCESSORIES (Note 4)***	
14	☑ ***ELECTRICAL PANEL***	☑ ***PLC (PROTOCOL IN ETHERNET AND***
15	☐ ***CHILLED WATER FLOW SWITCH***	***COMPATIBLE WITH THE WONDERWARE***
16	☐ ***CONDENSATION WATER FLOW SWITCH***	***PLATFORM (BMS SYSTEM)).***
17	☑ ***ANTI-VIBRATION DEVICE***	
18	☐ ***AUTOMATIC BLOCK VALVE***	
19	☑ ***ANTI-FREEZE PROTECTION***	
20	***GENERAL NOTES***	
21	*1) TO BE CONFIRMED BY SUPPLIER*	
22	*2) COP: COEFICIENT OF PERFORMANCE*	
23	*3) IPLV: PARTIAL LOAD EFFICIENCY CALCULATED TO ARI STANDARD 550 / 590 EQUATION.*	
24	*4) FOR ADDITIONAL INFORMATION AND SPECIFICATIONS SEE PRD-MEC-TSP-002 - TECHNICAL*	
25	*SPECIFICATION - CHILLERS*	
26	*5) OTHER REFRIGERANT SHOULD BE PROPOSED, BUT MUST BE HFC TYPE, FREE CHLORINE*	
27	*IN THE COMPOSITION.*	
28	*6) FREQUENCY INVERTER CONSIDERED ONLY FOR STARTING, NOT FOR CONTROL.*	
29		
30		
31		