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REV					DESCR	RIPTION					569-DB07-AIC-300-002	C-LIS-020	
REVIEW	REV. A	REV. 0	REV. 1	REV. 2	REV. 3	REV. 4	REV. 5	REV. 6	REV. 7	REV. 8	CLIENT:		
DATE	15APR2021	30SET2021	04MAY2022	30MAI2022							TAKEDA / BAXALTA		
EXEC	AAS	AAS	ACC	MAB							PROJECT:		REV.:
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NOTES AND REMARK	(S;					
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			REVISION 0 NOTES:			
	1- INSERTION OF THE MATERIALS OF THE SIGNALS TO BE RETANG	ULAR FIRI	E DAMPERS			
	2- INSERTION OF THE MATERIALS NEW SIGNALS FOR HVAC SYSTE	M (UPDAT	E)			
	3- UPDATE OF THE QUANTITATIVE IN DOCUMENT					
		REVISION	I 1 NOTES AS PER N+1 UPDATE:			
	1 - HIGHLIGHTED TEXT INFORM FUTURE INSTRUMENTS.					
	2 - STRIKETHROUGTH TEXT MEANS CANCELLED INSTRUME	VTS				
			REVISION 2			
	1 - CANCELED EQUIPMENT: RM-AHU-7A-5 AND INSTRUMENT	ATION OF	THE AHU-7A-5			









DOC NR: SHEET: 3 de 17 **BMS SYSTEM** 569-DB07-AIC-300-002 CLIENT NR: **EQUIPMENT & DEVICES SCHEDULE** REV.: PRD-AIC-LIS-020 2

NOTES AND REMARKS;
1) - THIS DOCUMENT CANCELS AND REPLACES THE FILE PRD-AIC-TS-005 USED IN THE BASIC DESIGN PHASE
1) - ESTE DOCUMENTO CANCELA E SUBSTITUI O ARQUIVO PRD-AIC-TS-005 UTILIZADO NA FASE DO PROJETO BÁSICO
2) - FOR FURTHER INFORMATION THE DATA SHEET OF THE INSTRUMENTS AND TECHNICAL SPECIFICATION SHOULD BE CONSULTED.
2) - PARA MAIORES INFORMAÇÕES DEVERÁ SER CONSULTADA A FOLHA DE DADOS DOS INSTRUMENTOS E ESPECIFICAÇÃO TÉCNICA.
3) - THE SWITCHES SHALL BE INSTALLED IN THE REMOTE PANELS OR AUTOMATION RACKS.
3) - OS SWITCHES DEVERÃO SER INSTALADOS NOS PAINÉS DE REMOTAS OU RACKS DE AUTOMAÇÃO.
4) - THE DAMPER ACTUATORS OF The HVAC MACHINES AND VAV'S ACTUATORS SHALL BE SUPPLYING THIRD PARTIES
4) - OS ATUADORES DOS DAMPERS DAS MÁQUINAS DE HVAC E DAS VAV'S SERÃO DE FORNECIMENTO DE TERCEIROS
5) - FOR FURTHER INFORMATION SHALL BE CONSULTED THE DRAWINGS OF THE PANEL LAYOUT.
5) - PARA MAIORES INFORMAÇÕES DEVERÁ SER CONSULTADO O DESENHO DE LAYOUT DO PAINEL.









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

DOC NR: SHEET: 4 de 17
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■ trengen		103	Orrpross brasile to de hemodenisados e brotecnologia		QUIPMENT & DEVI	CES SCHEDULE	ļ.	PRD-AIC	C-LIS-020	REV.: 2
TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
BUILDING 7A										
CP-A3001	BMS	BMS PLC CONTROLLER PANELS, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE CABINET.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	2000x800	CARBON STELL	5	1
RM-AHU-7A-1	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 5 ANALOG INPUT, 1 ANALOG IOUTPUT, 3 DIGITAL INPUT, 2 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7A-2	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 1 ANALOG OUTPUT, 3 DIGITAL INPUT, 4 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7A-3	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CADR: 5 ANALOG INPUT, 2 ANALOG OUTPUT, 2 DIGITAL INPUT, 2 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7A-4	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 3 ANALOG INPUT, 2 ANALOG OUTPUT, 2 DIGITAL INPUT, 2 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
RM-AHU-7A-6	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 1 ANALOG OUTPUT, 3 DIGITAL INPUT, 3 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-DOAS-7A-1	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 1 ANALOG INPUT, 1 ANALOG OUTPUT, 2 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-FCU-7A-1	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 3 ANALOG INPUT, 0 ANALOG OUTPUT, 3 DIGITAL INPUT, 5 DIGITAL OUTPUT.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-A3009-1	B.U	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 11 ANALOG INPUT, 0 ANALOG OUTPUT, 5 DIGITAL INPUT, 2 DIGITAL OUTPUT	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-A1043-1	B.U	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 1 ANALOG INPUT, 0 ANALOG OUTPUT, 1 DIGITAL INPUT, 0 DIGITAL OUTPUT	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
-	HVAC	ETHERNET TCP/IP MANAGED SWITCH - 8 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	8 CONNECTIONS RJ- 45	-	-	3	2









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	HVAC	ETHERNET TCP/IP MANAGED SWITCH - 4 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	4 CONNECTIONS RJ- 45	-	-	3	4
SW-A3009-1	B.U	ETHERNET TCP/IP MANAGED SWITCH - 24 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	24 CONNECTIONS RJ-45	-	-	3	1
SW-A1039	B.U	ETHERNET TCP/IP MANAGED SWITCH - 4 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	4 CONNECTIONS RJ- 45	-	-	3	1
-		TEMPERATURE AND HUMIDITY TRANSMITTER, MICROPROCESSED, INSTALLATION IN HVAC DUCT, WITH 02 ANALOG OUTPUTS OF THE 4-20MA, POWER SUPPLY IN 24VDC, FABRICATED IN POLYCARBONATE AND ABS, IP-65, NO DISPLAY - CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	CONTEMP	S501	-		POLYCARBONATE AND ABS	2	15
-	HVAC	PRESSURE TRANSMITTER, INSTALLATION IN HVAC DUCT, WITH 01 ANALOG OUTPUTS OF THE 4- 20MA, POWER SUPPLY IN 24VDC, FABRICATED IN STAINLESS STELL AND ABS, ACCURACY 0,25%, NO DISPLAY - CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	DWYER	SÉRIE 673	-	-	STAINLESS STELL AND ABS	2	15
-	HVAC	DIFERENTIAL PRESSURE AIR, INSTALLATION IN HVAC DUCT, WITH 03 CONTACT (COMMON- NORMALY OPEN - NORMALY CLOSED) FREE VOLTAGE, POWER SUPPLY IN 24VDC, FABRICATED IN ABS, TEMPERATURE RANGE - 20°C / +85°C, NO DISPLAY.	IN HVAC DUCT	VECTUS	VEC-DPS	-	-	ABS	2	9









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	HVAC	DAMPER ACTUATOR ELECTRONIC THROUGHOUT 0° to 95° ROTATION, 180 in-lb TORQUE, AUXILIARY SWITCH 1xSPDT, CONTROL TYPE 3-POINTS, IP-54, NEMA 2, EXTERNAL PUSH BUTTON, POWER CONSUMPTION 2,5W. ELECTRICAL ACCESSORIES AUXILIARY SWITCH 2xSPDT ADD-ON REFERENCE MODEL S2A.	IN HVAC MACHINE	BELIMO	AMB-3-S	-	-	-	4	39
-	HVAC	VAV DAMPER ACTUATOR ELECTRONIC THROUGHOUT 0° to 95° ROTATION, 45 in-lb TORQUE, CONTROL TYPE BACnet IP our MODBUS TCP, IP-54, NEMA 1, EXTERNAL PUSH BUTTON, POWER CONSUMPTION 3W.	FOR VAV BOX	BELIMO	LMB24-IP	-	-	-	4	130
-	HVAC	TEMPERATURE TRANSMITTER AIR, SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/οC, ACCURITY CLASS. SENSOR LENGHT 9" / 3" FLANGE FOR MOUNT ON SQUARE DUCT, TERMOWELL: SENSOR INTEGRAL TO TRANSMITTER; TRANSMITTER: NO DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	IN HVAC MACHINE	DWYER	ВТТ	-	-	ALUMINIUM HOUSIN	2	6
-	HVAC	TEMPERATURE TRANSMITTER AIR, SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/οC, ACCURITY CLASS., TERMOWELL: SENSOR INTEGRAL TO TRANSMITTER; TRANSMITTER: NO DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	DWYER / CONTEMP	-	-	-	ALUMINIUM HOUSIN	2	83
-	HVAC	AIR FLOW MEASUREMENT SYSTEM- (SINVA+TIVA) GROUP TRANSMITTER+SENSOR, FLOW RANGE 0 / 100.000m³/h, TEMPERATURE- OPERATION -25°C / 70°C, VOLTAGE 110/220VCA, FABRICATION IN ABS AND STELL, WITCH- DYSPLAY,SIGNAL OUTPUT 4-20mA.	IN HVAC MACHINE	VECTUS	SIMVA-2B	-	-	ABS AND STELL	2-	24









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	B.U	TEMPERATURE TRANSMITTER. SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/οC, ACCURACY CLASS B. TERMOWELL: TAPERED, SENSOR CONNECTION 1/2"NPT, PROCESS CONNECTION:3/4" NPT, THERMOWELL MATERIAL SS. TRANSMITTER,: LCD DISPLAY, ALUMINIUM HOUSING,, 24VDC, 4- 20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . SPAN -200 to 660oC, CALIBRATION: 0 to 150oC; SENSOR MODEL: TH13	LCD DISPLAY	ENDRESS + HAUSER	TMT162	-	-	ALUMINIUM HOUSING	2	25
-	HVAC	DIFFERENTIAL PRESSURE TRANSMITTER, 302 SS SENSOR, 1/8" NPT PORTS CONNECTION FOR HIGH AND LOW PRESSURE, INSTRUMENT RANGE 0 to 0.001 bar / 0 to 0.01 psi, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	NOT LCD DISPLAY	DWYER	677B	-	-	ALUMINIUM HOUSING	2	36
-	B.U	DIFFERENTIAL PRESSURE TRANSMITTER. GAUGE PRESSURE, 316L SS SENSOR, PROCESS CONNECTION 1/2 " NPT, IINSTRUMENT RANGE -1 to 10Barg. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . FOR GENERAL AREAS.	LCD DISPLAY	ENDRESS + HAUSER	Deltabar PMD75	-	-	ALUMINIUM HOUSING	2	3
-	B.U	PRESSURE TRANSMITTER. GAUGE PRESSURE, 316L SS SENSOR, PROCESS CONNECTION 1/2 "NPT, IINSTRUMENT RANGE -1 to 10Barg. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . FOR GENERAL AREAS.	LCD DISPLAY	ENDRESS + HAUSER	CERABAR M, PMC71	-	-	ALUMINIUM HOUSING	2	25
	HVAC	FLOWMETER, MEASURING PRINCIPLE: MEASURING THE HEAT LOSS FROM ONE OF THE TWO SENSING ELEMENTS IN THE AIR STREAM, THEN CALCULATING THE AIR VELOCITY, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE: 0 to 4 m/s , ALUMINIUM HOUSING, 24VDC, 4-20mA; CONDUIT CONNECTION 1/2"NPT	AIR	DWYER	SERIES AVU	-	-	ALUMINIUM HOUSING	2	44
-	B.U	FLOWMETER, MEASURING PRINCIPLE ELECTROMAGNETIC, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE 9 dm³/min to 162 000 m³/h. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	ELECTROMAGNETIC	ENDRESS + HAUSER	PROLINE PROMAG W 300	-	-	ALUMINIUM HOUSING	2	15









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
FIT-790312 FIT-790315 FIT-790317	B.U	FLOWMETER, TYPE VORTEX, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE 9 dm³/min to 162 000 m³/h. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	VORTEX	ENDRESS + HAUSER	PROLINE PROWIRL	-	-	ALUMINIUM HOUSING	2	3
PCV-790201	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. STEAM; SET POINT 4 BarG, 3";	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PCV-790101	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. STEAM; SET POINT 2 BarG; DN 3";	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PCV-610001	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. FLUID WATER; SET POINT: 3.5 Barg; DN 4".	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PSV-790201	B.U	SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. STEAM; SET POINT 4 BarG, 3";	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
PSV-790101	B.U	SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. STEAM; SET POINT 2 BarG; DN 3";	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
PSV-610001	B.U	SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. FLUID WATER; SET POINT: 3.5 Barg; DN 4".	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
FV-940053	B.U	CONTROL VALVE, VALVE INDUSTRIAL GLOBE TYPE. FLUID COOLING WATER; DN 12".	GLOBE	FISHER	EASY-E ED CONTROL	-	-	-	2	1
FV-940054	B.U	CONTROL VALVE, VALVE INDUSTRIAL GLOBE TYPE. FLUID COOLING WATER; DN 6".	GLOBE	FISHER	EASY-E ED CONTROL	-	-	-	2	1
XV-940081 XV-940083 XV-940085	B.U	ON-OFF CONTROL VALVE, VALVE INDUSTRIAL TYPE. FLUID WATER; DN 1".	ON-OFF	FISHER	Vee-Ball V300	-	-	-	2	2
XV-960004 XV-960005 XV-960006	B.U	MOTORIZED CONTROL VALVE, VALVE INDUSTRIAL BUTTERFLY TYPE. FLUID COOLING WATER; DN 12".	BUTTERFLY	ROTORK	IQ	-	-	-	2	2









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
XV-9600120 XV-9600135 XV-9600150	B.U	MOTORIZED CONTROL VALVE, VALVE INDUSTRIAL BUTTERFLY TYPE. FLUID COOLING WATER; DN 10".	BUTTERFLY	ROTORK	IQ	-	-	-	2	2
XV-980056 	B.U	MOTORIZED CONTROL VALVE, VALVE INDUSTRIAL BUTTERFLY TYPE. FLUID COOLING WATER; DN 6".	BUTTERFLY	ROTORK	IQ	-	-	-	2	3
-	B.U	O2 TRANSMITTER; ELECTROCHEMICAL SENSOR; OXYGEN (O2) XCD SENSORS; RANGE: 25.0%Vol; INPUT VOLTAGE RANGE: 16 to 32 VDC (24 VDC NOMINAL); 4-20mA OUTPUT; HOUSING: EPOXY PAINTED ALUMINIUM ALLOY ADC12; SENSOR: 316 SS	ANALISER	NOVATECH	Dual Probe 1732	-	-	-	2	1
LIT-980051 LIT-980052	B.U	LEVEL TRANSMITTER, HYDROSTATIC LEVEL MEASUREMENT; PROCESS CONNECTION 1/2 "NPT, INSTRUMENT RANGE 0.1 to 10 bar. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	LCD DISPLAY	ENDRESS + HAUSER	Deltapilot FMB70	-	-	ALUMINIUM HOUSING	2	2
LSHL-960070	B.U	LEVEL SWITCH, TYPE CAPACITIVE, NO LCD DISPLAY, ALUMINIUM HOUSING, CONTACT RELAY FREE VOLTAGE.	TYPE CAPACITIVE	ENDRESS + HAUSER	FTL51H	-	-	ALUMINIUM HOUSING	2	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
BUILDING 7B										
CP-B3001	BMS	BMS PLC CONTROLLER PANELS, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE CABINET.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	2000x800	CARBON STELL	5	1
RM-AHU-7B-1	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O: 2 ANALOG INPUT, 1 ANALOG IOUTPUT, 2 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-2	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 6 ANALOG INPUT, 2 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-3	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 3 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-4	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 3 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

DOC NR: SHEET: 12 de 17

								PRD-AI	C-LIS-020	
TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
RM-AHU-7B-5	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 3 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-6	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 3 ANALOG INPUT, 1 ANALOG OUTPUT, 3 DIGITAL INPUT, 2 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-7	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 3 ANALOG INPUT, 1 ANALOG OUTPUT, 2 DIGITAL INPUT, 2 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-8	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 3 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-AHU-7B-9	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 4 ANALOG INPUT, 1 ANALOG OUTPUT, 3 DIGITAL INPUT, 3 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

DOC NR: SHEET: 13 de 17 569-DB07-AIC-300-002 REV.:

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
RM-DOAS-7B-1		REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 2 ANALOG INPUT, 1 ANALOG OUTPUT, 2 DIGITAL INPUT, 1 DIGITAL OUTPUT AND 1 INDUSTRIAL NETWORK.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-FCU-7B-1	HVAC	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 3 ANALOG INPUT, 0 ANALOG OUTPUT, 3 DIGITAL INPUT, 6 DIGITAL OUTPUT.	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
RM-B3012-1	B.U	REMOTE PANEL WITH DISTRIBUTED I/O, REQUIRED ETHERNET COMMUNICATION MODULES, POWER SUPPLIES, TERMINAL BOARD AND ACCESORIES. ONE PANEL SET CABINET. QUANTITY OF I/O CARD: 8 ANALOG INPUT, 0 ANALOG OUTPUT, 3 DIGITAL INPUT, 1 DIGITAL OUTPUT	CABINET FLOOR, INTERNAL USE, UL, CSA, NEMA	SIEMENS	N/A	N/A	800x1600	CARBON STELL	5	1
-	HVAC	ETHERNET TCP/IP MANAGED SWITCH - 8 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	8 CONNECTIONS RJ- 45	-	-	3	2
-	HVAC	ETHERNET TCP/IP MANAGED SWITCH - 4 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	4 CONNECTIONS RJ- 45	-	-	3	8
SW-B3012-1		ETHERNET TCP/IP MANAGED SWITCH - 24 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	24 CONNECTIONS RJ-45	-	-	3	1
SW-B1031-1	B.U	ETHERNET TCP/IP MANAGED SWITCH - 4 PORTS FOR COPPER; RATED SUPPLY VOLTAGE 24 VDC; MOUNTING SUPPORT 35 mm SYMMETRICAL DIN RAIL	MANAGED	SIEMENS	SCALANCE SÉRIE X200	4 CONNECTIONS RJ- 45	-	-	3	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	HVAC	TEMPERATURE AND HUMIDITY TRANSMITTER, MICROPROCESSED, INSTALLATION IN HVAC DUCT, WITH 02 ANALOG OUTPUTS OF THE 4-20MA, POWER SUPPLY IN 24VDC, FABRICATED IN POLYCARBONATE AND ABS, IP-65, NO DISPLAY - CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	CONTEMP	S501	-	-	POLYCARBONATE AND ABS	2	20
-	HVAC	PRESSURE TRANSMITTER, INSTALLATION IN HVAC DUCT, WITH 01 ANALOG OUTPUTS OF THE 4- 20MA, POWER SUPPLY IN 24VDC, FABRICATED IN STAINLESS STELL AND ABS, ACCURACY 0,25%, NO DISPLAY - CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	DWYER	SÉRIE 673	-	-	STAINLESS STELL AND ABS	2	20
-	HVAC	DIFERENTIAL PRESSURE AIR, INSTALLATION IN HVAC DUCT, WITH 03 CONTACT (COMMON- NORMALY OPEN - NORMALY CLOSED) FREE VOLTAGE, POWER SUPPLY IN 24VDC, FABRICATED IN ABS, TEMPERATURE RANGE - 20°C / +85°C, NO DISPLAY.	IN HVAC DUCT	VECTUS	VEC-DPS	-	-	ABS	2	11
-	HVAC	DAMPER ACTUATOR ELECTRONIC THROUGHOUT 0° to 95° ROTATION, 180 in-lb TORQUE, AUXILIARY SWITCH 1xSPDT, CONTROL TYPE 3-POINTS, IP-54, NEMA 2, EXTERNAL PUSH BUTTON, POWER CONSUMPTION 2,5W. ELECTRICAL ACCESSORIES AUXILIARY SWITCH 2xSPDT ADD-ON REFERENCE MODEL S2A.	IN HVAC MACHINE	BELIMO	AMB-3-S	-	-	-	4	49
-	HVAC	VAV DAMPER ACTUATOR ELECTRONIC THROUGHOUT 0° to 95° ROTATION, 45 in-lb TORQUE, CONTROL TYPE BACnet IP our MODBUS TCP, IP-54, NEMA 1, EXTERNAL PUSH BUTTON, POWER CONSUMPTION 3W.	FOR VAV BOX	BELIMO	LMB24-IP	-	-	-	4	157









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	TYPE	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	HVAC	TEMPERATURE TRANSMITTER AIR, SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/οC, ACCURITY CLASS. SENSOR LENGHT 9" / 3" FLANGE FOR MOUNT ON SQUARE DUCT, TERMOWELL: SENSOR INTEGRAL TO TRANSMITTER; TRANSMITTER: NO DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	IN HVAC MACHINE	DWYER	ВТТ	-	-	ALUMINIUM HOUSIN	2	10
-	HVAC	TEMPERATURE TRANSMITTER AIR, SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/oC, ACCURITY CLASS., TERMOWELL: SENSOR INTEGRAL TO TRANSMITTER; TRANSMITTER: NO DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	IN HVAC DUCT	DWYER / CONTEMP	-	-	-	ALUMINIUM HOUSIN	2	85
-	HVAC	AIR FLOW MEASUREMENT SYSTEM- (SINVA+TIVA) GROUP TRANSMITTER+SENSOR, FLOW RANGE 0 / 100.000m³/h, TEMPERATURE- OPERATION -25°C / 70°C, VOLTAGE 110/220VCA, FABRICATION IN ABS AND STELL, WITCH- DYSPLAY,SIGNAL OUTPUT 4-20mA.	IN HVAC MACHINE	VECTUS	SIMVA-2B	-	-	ABS AND STELL	2-	28-
-	B.U	TEMPERATURE TRANSMITTER. SENSOR: DUPLEX SENSOR, 3 WIRES, PT 100, SENSOR MATERIAL 316 SS, 100 Ω A 0°C, α=0.00385/oC, ACCURACY CLASS B. TERMOWELL: TAPERED, SENSOR CONNECTION 1/2"NPT, PROCESS CONNECTION:3/4" NPT, THERMOWELL MATERIAL SS. TRANSMITTER,: LCD DISPLAY, ALUMINIUM HOUSING,, 24VDC, 4- 20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . SPAN -200 to 660oC, CALIBRATION: 0 to 150oC; SENSOR MODEL: TH13	LCD DISPLAY	ENDRESS + HAUSER	TMT162	-	-	ALUMINIUM HOUSING	2	18
-	HVAC	DIFFERENTIAL PRESSURE TRANSMITTER, 302 SS SENSOR, 1/8" NPT PORTS CONNECTION FOR HIGH AND LOW PRESSURE, INSTRUMENT RANGE 0 to 0.001 bar / 0 to 0.01 psi, ALUMINIUM HOUSING, 24VDC, 4-20mA, CONDUIT CONNECTION 1/2"NPT.	NOT LCD DISPLAY	DWYER	677B	-	-	ALUMINIUM HOUSING	2	56









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	ТҮРЕ	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
-	B.U	DIFFERENTIAL PRESSURE TRANSMITTER. GAUGE PRESSURE, 316L SS SENSOR, PROCESS CONNECTION 1/2 " NPT, IINSTRUMENT RANGE -1 to 10Barg. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . FOR GENERAL AREAS.	LCD DISPLAY	ENDRESS + HAUSER	Deltabar PMD75	-	-	ALUMINIUM HOUSING	2	4
-	B.U	PRESSURE TRANSMITTER. GAUGE PRESSURE, 316L SS SENSOR, PROCESS CONNECTION 1/2 " NPT, IINSTRUMENT RANGE -1 to 10Barg. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT . FOR GENERAL AREAS.	LCD DISPLAY	ENDRESS + HAUSER	CERABAR M, PMC71	-	-	ALUMINIUM HOUSING	2	18
-	HVAC	FLOWMETER, MEASURING PRINCIPLE: MEASURING THE HEAT LOSS FROM ONE OF THE TWO SENSING ELEMENTS IN THE AIR STREAM, THEN CALCULATING THE AIR VELOCITY, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE: 0 to 4 m/s, ALUMINIUM HOUSING, 24VDC, 4-20mA; CONDUIT CONNECTION 1/2"NPT	AIR	DWYER	SERIES AVU	-	-	ALUMINIUM HOUSING	2	21
-	B.U	FLOWMETER, MEASURING PRINCIPLE ELECTROMAGNETIC, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE 9 dm³/min to 162 000 m³/h. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	ELECTROMAGNETIC	ENDRESS + HAUSER	PROLINE PROMAG W 300	-	-	ALUMINIUM HOUSING	2	9
FIT-790319	B.U	FLOWMETER, TYPE VORTEX, PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE 9 dm³/min to 162 000 m³/h. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	VORTEX	ENDRESS + HAUSER	PROLINE PROWIRL	-	-	ALUMINIUM HOUSING	2	1
LIT-980005 LIT-980006	B.U	LEVEL TRANSMITTER, HYDROSTATIC LEVEL MEASUREMENT; PROCESS CONNECTION 1/2 " NPT, INSTRUMENT RANGE 0.1 to 10 bar. LCD DISPLAY, ALUMINIUM HOUSING, 24VDC, 4-20mA, HART PROTOCOL; CONDUIT CONNECTION 1/2"NPT	LCD DISPLAY	ENDRESS + HAUSER	Deltapilot FMB70	-	-	ALUMINIUM HOUSING	2	2
LSHL-070060	B.U	LEVEL SWITCH, TYPE CAPACITIVE, NO LCD DISPLAY, ALUMINIUM HOUSING, CONTACT RELAY FREE VOLTAGE.	CAPACITIVE	ENDRESS + HAUSER	FTL51H	-	-	ALUMINIUM HOUSING	2	1









BMS SYSTEM EQUIPMENT & DEVICES SCHEDULE

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TAG	SYSTEM	EQUIPMENT NAME	ТҮРЕ	MANUFACTURER	REF. MODEL	CAPACITY	DIMENSIONS (mm)	MATERIAL	REMARKS	QUANTITY
PCV-790212	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. STEAM; SET POINT 4 BarG, 3";	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PCV-790104	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. STEAM; SET POINT 2 BarG; DN 3";	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PCV-610050	B.U	SELF REGULATOR, PRESSURE REDUCING TYPE. FLUID WATER; SET POINT: 3.5 Barg; DN 4".	PCV-INDUSTRIAL	SPIRAX SARCO	SRV 461-463	-	-	-	2	1
PSV-790212		SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. STEAM; SET POINT 4 BarG, 3";	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
PSV-790104		SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. STEAM; SET POINT 2 BarG; DN 3";	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
PSV-610051		SAFETY VALVE ALIVE, VALVE INDUSTRIAL TYPE. FLUID WATER; SET POINT: 3.5 Barg; DN 4".	PSV-INDUSTRIAL	CROSBY	SV80H	-	-	-	2	1
TV-0700013	B.U	CONTROL VALVE, VALVE INDUSTRIAL GLOBE TYPE. FLUID COOLING WATER; DN 4".	GLOBE	FISHER	EASY-E ED CONTROL	-	-	-	2	1
XV-940031 	B.U	ON-OFF CONTROL VALVE, VALVE INDUSTRIAL TYPE. FLUID WATER.	ON-OFF	FISHER	Vee-Ball V300	-	-	-	2	2
XV-980014 — XV-980016	B.U	MOTORIZED CONTROL VALVE, VALVE INDUSTRIAL BUTTERFLY TYPE. FLUID COOLING WATER; DN 8".	BUTTERFLY	ROTORK	IQ	-	-	-	2	1
XV-980001 —XV-980002	B.U	MOTORIZED CONTROL VALVE, VALVE INDUSTRIAL BUTTERFLY TYPE. FLUID COOLING WATER; DN 10".	BUTTERFLY	ROTORK	IQ	-	-	-	2	1