


Company:		Name	Visa	Date
Project Name: 10TPH MILK PASTEURIZER	Drawn	BDM		01.02.2022
	Checked			
	Approved	HT		01.02.2022
 Tel : +90 (312) 641 32 52 Fax : +90 (312) 394 77 95 ● : gemak@gemak.com.tr	Project No: 2021-088	Drawing No: 088-001	Rev: 01	Page: 1/1
	<small>THIS PRINT IS PROPERTY OF GEMAK AND MAY NOT BE USED OR CHANGED WITHOUT WRITTEN AUTHORITY.</small>			



Alfa Laval Plate Heat Exchanger Specification

PHE type P10-M

End Customer/country	Date 21.06.2021	Handled by	Project no
Order no	Representative Alfa Laval		Item no 10 TPH TS 22 FAT 14% V2

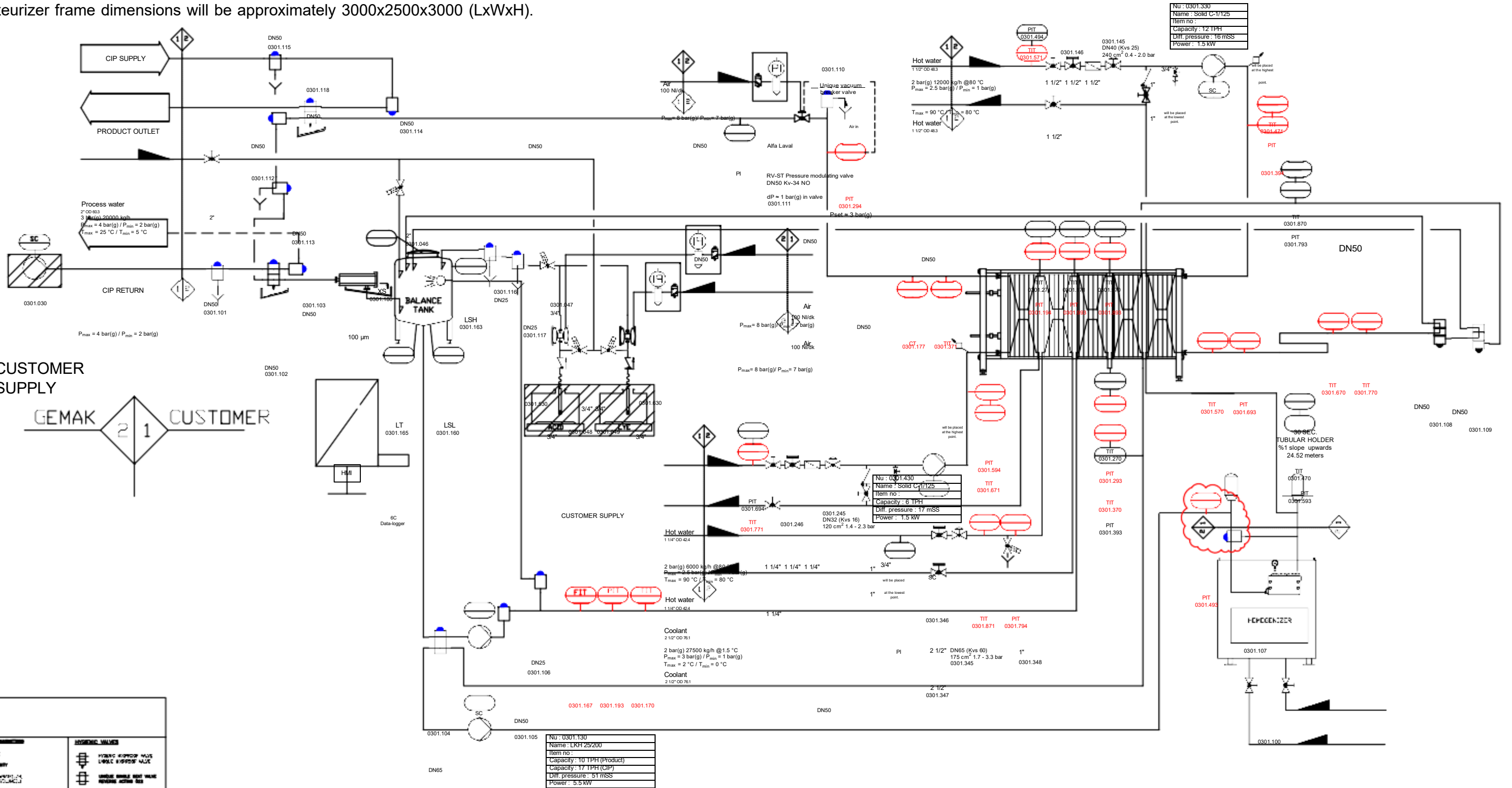
Section I is closest to the frame plate.

Section	Flowrate(kg/h)	Media	Temperature progr.(°C)	dP(mwg)
I	9926	Hot Water	68 <- 80	2
	10000	TS 22.0% Fat 10-14% Whole milk	63 -> 74	4
II	10000	TS 22.0% Fat 10-14% Whole milk	58 <- 74	8
	10000	TS 22.0% Fat 10-14% Whole milk	48 -> 63	8
III	10000	TS 22.0% Fat 10-14% Whole milk	15 <- 58	11
	10000	TS 22.0% Fat 10-14% Whole milk	4 -> 47	12
IV	10000	TS 22.0% Fat 10-14% Whole milk	4 <- 15	4
	22447	Ice Water	2 -> 7	7
V	10000	TS 22.0% Fat 10-14% Whole milk	32 <- 15	4
	4279	Hot Water	80 -> 35	3

Plates				
(Gaskets are Clip-on if not otherwise mentioned)				
Section	Quantity	Material	Thickness	Gasket
All	297	ALLOY 316	0.50 mm	NBR
Frame				
PV Code	Connection standard	Lengths		Accessories included
PED	Frame(S1): DIN Frame(S4): DIN <input type="checkbox"/> Other (state below):	LC:	3000 mm	
		LT:	2960 mm	
Max. working pressure: 7 at Test pressure: 9 at Design temp.: 110 °C				

Piping norm : EN 10357 (not US 1528)

Pasteurizer frame dimensions will be approximately 3000x2500x3000 (LxWxH).



SYMBOL	DESCRIPTION
[Symbol]	ISOLATED VALVE
[Symbol]	NON-RETURN VALVE
[Symbol]	LEVEL
[Symbol]	PRESSURE/TEMPERATURE
[Symbol]	ACTUATOR FUNCTIONS
[Symbol]	PLUMBS
[Symbol]	CONTROLLING
[Symbol]	REVISION
[Symbol]	TRANSMISSION
[Symbol]	ISOLATED VALVE
[Symbol]	NON-RETURN VALVE
[Symbol]	LEVEL
[Symbol]	PRESSURE/TEMPERATURE
[Symbol]	ACTUATOR FUNCTIONS
[Symbol]	PLUMBS
[Symbol]	CONTROLLING
[Symbol]	REVISION
[Symbol]	TRANSMISSION

Sensors to be recorded were shown in red coloured.

00	Final P&ID	06.08.2021
Revision	Description	Rev. Date

Company:			
Project Name:	10TPH MILK PASTEURIZER		
Drawn	BDM	Visa	Date
Checked			01.02.2022
Approved	HT		01.02.2022
Project No:	Drawing No:	Rev:	Page:
2021-088	088-001	01	1/1



THIS PRINT IS PROPERTY OF GEMAK AND MAY BE REPRODUCED WITHOUT THE AUTHORITY OF GEMAK



Ekipman Kontrol Raporu / Equipment Control Report

Tarih / Date: 2.12.2021
Dök. Nu. / Doc. No. F.113
Rev. Nu. / Rev. No. 01
Sayfa / Page 1/4

Proje Nu. / Project No.

Proje İsmi / Project Name

Test Tarihi / Test Date

Rapor Nu. / Report No.

2020-088

P&ID Kodu / P&ID Code	Tip / Type	Fonksiyon Açıklaması / Function Description	Kabul / Accept (√)	Red / Denied (X)
0301.101	SSV 300	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.102	MIXPROOF	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.103	SSV 200	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.104	RA 022	PASTEURIZER DIVERT CONDITION PRESSURE SAFETY VALVE	✓	
0301.105	SSV 200	PASTEURIZER STOP VALVE	✓	
0301.106	SSV 200	PASTEURIZER CIP STOP VALVE	✓	
0301.107	SSV 300	HOMOGENIZER BY-PASS VALVE	✓	
0301.108	RA 111	PASTEURIZER DIVERT VALVE-I	✓	
0301.109	RA 111	PASTEURIZER DIVERT VALVE-II	✓	
0301.110	VB	PASTEURIZER ANTI-VACUUM VALVE	✓	
0301.111	RV-ST	PASTEURIZER PRESSURE MODULATING VALVE	✓	
0301.112	SSV 200	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.113	SSV 210	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.114	SSV 200	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.115	SSV 300	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.116	SSV 210	CIP CHEMICAL DRAIN VALVE-I	✓	
0301.117	SSV 210	CIP CHEMICAL DRAIN VALVE-II	✓	
0301.118	MIXPROOF	PASTEURIZER INLET/OUTLET VALVE CLUSTER	✓	
0301.130	LKH	PASTEURIZER MAIN PUMP	✓	
0301.230	LKH	PASTEURIZER DIVERT CONDITION PRESSURE SAFETY PUMP	✓	
0301.330	SOLIDC	PASTEURIZATION SECTION HOT WATER PUMP	✓	
0301.430	SOLIDC	HEATING SECTION HOT WATER PUMP	✓	
0301.530	TR50	CIP CHEMICAL DOSING PUMP	✓	
0301.630	TR50	CIP CHEMICAL DOSING PUMP	✓	
0301.100		HOMOGENIZER	✓	
0301.145	3241-1	PASTEURIZATION SECTION HEATING MEDIUM FLOW MODULATING VALVE	✓	
0301.146	3354	PASTEURIZATION SECTION HEATING MEDIUM FLOW STOP VALVE	✓	

Açıklamalar / Explanations:

Yapan / Done by	Kontrol eden / Controlled by	Onaylayan / Approved by
İsim Soyisim & İmza / Name Surname & Signature 	İsim Soyisim & İmza / Name Surname & Signature 	İsim Soyisim & İmza / Name Surname & Signature



Ekipman Kontrol Raporu / Equipment Control Report

Tarih / Date: 2.12.2021
Dök. Nu. / Doc. No. F.113
Rev. Nu. / Rev. No. 01
Sayfa / Page 2/4

Proje Nu. / Project No.	Proje İsmi / Project Name	Test Tarihi / Test Date	Rapor Nu. / Report No.
2020-088			

P&ID Kodu / P&ID Code	Tip / Type	Fonksiyon Açıklaması / Function Description	Kabul / Accept (✓)	Red / Denied (X)
0301.245	3241-1	HEATING SECTION HEATING MEDIUM FLOW MODULATING VALVE	✓	
0301.246	3354	HEATING SECTION HEATING MEDIUM FLOW STOP VALVE	✓	
0301.345	3241-1	COOLING SECTION COOLANT FLOW MODULATING VALVE	✓	
0301.346	3354	COOLING SECTION COOLANT FLOW STOP VALVE	✓	
0301.347	3354	COOLING SECTION COOLANT FLOW STOP VALVE	✓	
0301.348	3353	COOLING SECTION COOLANT DRAIN VALVE	✓	
0301.046	3353	BALANCE TANK PROCESS WATER STOP VALVE	✓	
0301.047	3353	CIP CHEMICALS DOSING LINE STOP VALVE	✓	
0301.048	3353	CIP CHEMICAL STATION PROCESS WATER STOP VALVE	✓	
0301.049	3353	CIP CHEMICAL STATION PROCESS WATER STOP VALVE	✓	
0301.160		BALANCE TANK LOWEST LEVEL SENSOR	✓	
0301.163		BALANCE TANK HIGHEST LEVEL SENSOR	✓	
0301.165		BALANCE TANK LEVEL SENSOR	✓	
0301.180		BALANCE TANK MANHOL SAFETY SWITCH	✓	
0301.167		FLOWMETER	✓	
0301.170		PASTEURIZER INLET TEMPERATURE SENSOR	✓	
0301.270		PASTEURIZER 3RD RAW SECTION OUTLET TEMPERATURE SENSOR	✓	
0301.370		PASTEURIZER 4TH RAW SECTION OUTLET TEMPERATURE SENSOR	✓	
0301.470		PASTEURIZER PASTEURIZATION SECTION INLET TEMPERATURE SENSOR	✓	
0301.570		PASTEURIZATION DEGREE TEMPERATURE SENSOR	✓	
0301.670		PASTEURIZER DIVERT TEMPERATURE SENSOR-I	✓	
0301.770		PASTEURIZER DIVERT TEMPERATURE SENSOR-II	✓	
0301.870		PASTEURIZER 4TH PASTEURIZED SECTION INLET TEMPERATURE SENSOR	✓	
0301.970		PASTEURIZER 3RE PASTEURIZED SECTION INLET TEMPERATURE SENSOR	✓	
0301.171		PASTEURIZER 2ND PASTEURIZED SECTION INLET TEMPERATURE SENSOR	✓	
0301.271		PASTEURIZER 1ST PASTEURIZED SECTION INLET TEMPERATURE SENSOR	✓	
0301.371		PASTEURIZER OUTLET TEMPERATURE SENSOR	✓	

Açıklamalar / Explanations:

Yapan / Done by	Kontrol eden / Controlled by	Onaylayan / Approved by
İsim Soyisim & İmza / Name Surname & Signature	İsim Soyisim & İmza / Name Surname & Signature	İsim Soyisim & İmza / Name Surname & Signature



Ekipman Kontrol Raporu / Equipment Control Report

Tarih / Date: 2.12.2021

Dök. Nu. / Doc. No. F.113

Rev. Nu. / Rev. No. 01

Sayfa / Page 3/4

Rapor Nu. / Report No.

Proje Nu. / Project No.

Proje İsmi / Project Name

Test Tarihi / Test Date

2020-088

P&ID Kodu / P&ID Code	Tip / Type	Fonksiyon Açıklaması / Function Description	Kabul / Accept (√)	Red / Denied (X)
0301.471		PASTEURIZATION SECTION HOW WATER INLET TEMPERATURE SENSOR	√	
0301.571		PASTEURIZATION SECTION HOT WATER SUPPLY LINE TEMPERATURE SENSOR	√	
0301.671		HEATING SECTION HOW WATER INLET TEMPERATURE SENSOR	√	
0301.771		HEATING SECTION HOT WATER SUPPLY LINE TEMPERATURE SENSOR	√	
0301.871		COOLING SECTION COLD WATER INLET TEMPERATURE SENSOR	√	
0301.193		PASTEURIZER INLET PRESSURE SENSOR	√	
0301.293		PASTEURIZER 3RD RAW SECTION OUTLET PRESSURE SENSOR	√	
0301.393		PASTEURIZER 4TH RAW SECTION OUTLET PRESSURE SENSOR	√	
0301.493		HOMOGENIZER INLET PRESSURE SENSOR	√	
0301.593		PASTEURIZER PASTEURIZATION SECTION INLET PRESSURE SENSOR	√	
0301.693		PASTEURIZER PASTEURIZATION SECTION OUTLET PRESSURE SENSOR	√	
0301.793		PASTEURIZER 4TH PASTEURIZED SECTION INLET PRESSURE SENSOR	√	
0301.893		PASTEURIZER 3RE PASTEURIZED SECTION INLET PRESSURE SENSOR	√	
0301.993		PASTEURIZER 2ND PASTEURIZED SECTION INLET PRESSURE SENSOR	√	
0301.194		PASTEURIZER 1ST PASTEURIZED SECTION INLET PRESSURE SENSOR	√	
0301.294		PASTEURIZER OUTLET PRESSURE DEGREE SENSOR	√	
0301.394		PASTEURIZATION SECTION HOW WATER INLET PRESSURE SENSOR	√	
0301.494		PASTEURIZATION SECTION HOT WATER SUPPLY LINE PRESSURE SENSOR	√	
0301.594		HEATING SECTION HOW WATER INLET PRESSURE SENSOR	√	
0301.694		HEATING SECTION HOT WATER SUPPLY LINE PRESSURE SENSOR	√	
0301.794		COOLING SECTION COLD WATER INLET PRESSURE SENSOR	√	
0301.177		CONDUCTIVITY SENSOR	√	
0301.030		PASTEURIZER FEEDING PUMP	√	
			√	
			√	
			√	
			√	

Açıklamalar / Explanations:

Yapan / Done by	Kontrol eden / Controlled by	Onaylayan / Approved by
İsim Soyisim & İmza / Name Surname & Signature 	İsim Soyisim & İmza / Name Surname & Signature 	İsim Soyisim & İmza / Name Surname & Signature



Ekipman Kontrol Raporu / Equipment Control Report

Tarih / Date:	20.09.2021
Dök. Nu. / Doc. No.	F.113
Rev. Nu. / Rev. No.	01
Sayfa / Page	4/4

Proje Nu. / Project No.	Proje İsmi / Project Name	Test Tarihi / Test Date	Rapor Nu. / Report No.
2020-088			

P&ID Kodu / P&ID Code	Tip / Type	Fonksiyon Açıklaması / Function Description	Ürün Görevi / Product Duty			CIP Görevi / CIP Duty		
			Akış Debisi / Flowrate (L/h)	Basınç / Pressure (bar)	Akım / Current (A)	Akış Debisi / Flowrate (L/h)	Basınç / Pressure (bar)	Akım / Current (A)
0301.130	LKH	PASTEURIZER MAIN PUMP	10000		7.1/84			
0301.230	LKH	PASTEURIZER DIVERT CONDITION PRESSURE SAFETY PUMP			2.8/100			
0301.167		FLOWMETER	10000					
0301.193		PASTEURIZER INLET PRESSURE SENSOR		3.3				
0301.293		PASTEURIZER 3RD RAW SECTION OUTLET PRESSURE SENSOR		2.5				
0301.393		PASTEURIZER 4TH RAW SECTION OUTLET PRESSURE SENSOR		1.8				
0301.493		HOMOGENIZER INLET PRESSURE SENSOR		4.1				
0301.593		PASTEURIZER PASTEURIZATION SECTION INLET PRESSURE SENSOR		4.0				
0301.693		PASTEURIZER PASTEURIZATION SECTION OUTLET PRESSURE SENSOR		3.6				
0301.793		PASTEURIZER 4TH PASTEURIZED SECTION INLET PRESSURE SENSOR		3.7				
0301.893		PASTEURIZER 3RE PASTEURIZED SECTION INLET PRESSURE SENSOR		2.9				
0301.993		PASTEURIZER 2ND PASTEURIZED SECTION INLET PRESSURE SENSOR		2.1				
0301.194		PASTEURIZER 1ST PASTEURIZED SECTION INLET PRESSURE SENSOR		2.0				
0301.294		PASTEURIZER OUTLET PRESSURE DEGREE SENSOR		1.6				
0301.111	RV-ST	PASTEURIZER PRESSURE MODULATING VALVE	Açıklık oranı yazılmalı	0/091				

Açıklamalar / Explanations:

Yapan / Done by	Kontrol eden / Controlled by	Onaylayan / Approved by
İsim Soyisim & İmza / Name Surname & Signature	İsim Soyisim & İmza / Name Surname & Signature	İsim Soyisim & İmza / Name Surname & Signature