Rev	Description	Designer	Appr. By	Date

FLOW DIAGRAM SYMBOLS

PIPING SYMBOLS

- PROCESS MEDIA, RED
- CLEANING MEDIA, MAGENTA
- SERVICE MEDIA, CYAN
- ELECTRICAL CONTROL, GREEN
- AIR CONTROL, BLUE
- LIQUID CONTROL, ORANGE
- FLEXIBLE HOSE
- PIPE WITH HEATING OR COOLING JACKET
- PIPE WITH HEATING OR COOLING COIL
- CAP ON PIPE END
- UNION
- INSULATED PIPE
- LIMIT OF DELIVERY
- ORIFICE

DENOMINATION

A	AIR
IA	INSTRUMENT AIR
SA	SANITARY AIR
C	CONDENSATE
D	DRAIN
S	STEAM
W	WATER
CW	COOLING WATER
HW	HOT WATER
IW	ICE WATER
SW	SOFTENED WATER
TW	TOWER WATER
GW	GLYCOL WATER
G	GAS
--R	RETURN
--C	CIRCULATION
CIP PR	CLEANING PRESSURE LINE
CIP R	CLEANING RETURN LINE

INSTRUMENTS

- COMMON INSTRUMENT LOCALLY MOUNTED
- COMMON INSTRUMENT PANEL MOUNTED OR SOFT-WARE FUNCTION
- DUMMY

FIRST LETTER

Measured or initiation variable

- D — DENSITY
- F — FLOWRATE (L/H), MASSFLOW (KG/H) OR VOLUME (L)
- G — POSITION
- L — LEVEL
- P — PRESSURE/VACUUM
- Pd — PRESSURE DIFFERENCE
- Q — QUALITY*
- T — TEMPERATURE
- W — WEIGHT
- S — FREQUENCY/SPEED

SECOND LETTER

Display of output function

- C — CONTROLLING
- E — SENSING ELEMENT
- I — INDICATING
- R — RECORDING
- S — SWITCHING
- T — TRANSMITTING
- X — CONVERTING

THIRD LETTER

Qualifying letter

- H — HIGH
- M — MEDIUM
- L — LOW

*TYPE OF QUALITY

- BRIX — BRIX
- PH — pH
- COND — CONDUCTIVITY
- TURB — TURBIDITY

HYGIENIC VALVES

- ASEPTIC VALVE GENERAL SYMBOL
- MANUAL PLUG COCK 2-WAY
- MANUAL PLUG COCK 3-WAY
- MANUAL SANITARY CONTROL VALVE
- FLOW CONTROL VALVE
- SANITARY MODULATING VALVE
- SANITARY NON-RETURN VALVE
- SANITARY MANUAL VALVE
- SANITARY AUTOMATIC VALVE
- SANITARY MANUAL BUTTERFLY VALVE
- SANITARY AUTOMATIC BUTTERFLY VALVE NORMALLY CLOSED, NC
- SANITARY AUTOMATIC BUTTERFLY VALVE NORMALLY OPEN, NO
- SANITARY MIXPROOF VALVE CLEANING OF SPINDLE AND CHAMBER
- SANITARY MIXPROOF VALVE
- SANITARY MIXPROOF VALVE TANK OUTLET
- ASEPTIC SAMPLING VALVE
- SANITARY SAMPLING VALVE
- AIR BLOW VALVE

NON-HYGIENIC VALVES

- NORMALLY OPEN VALVE WAY
- NORMALLY CLOSED VALVE WAY
- MANUAL SHUT-OFF VALVE
- MANUAL CHANGE-OVER VALVE
- MANUAL CONTROL VALVE
- AIR RELEASE VALVE
- VACUUM RELEASE VALVE
- PRESSURE RELEASE VALVE
- CONSTANT FLOW/PRESSURE VALVE
- NON-RETURN VALVE
- AUTOMATIC SHUT-OFF VALVE
- AUTOMATIC CHANGE- OVER VALVE
- AUTOMATIC MODULATING VALVE 2-WAY
- AUTOMATIC MODULATING VALVE 3-WAY
- SOLENOID VALVE

ACTUATOR FUNCTIONS

- HAND ACTUATOR
- MODULATING ACTUATOR
- ON/OFF ACTUATOR
- SOLENOID ACTUATOR
- ELECTRIC MOTOR
- SPRING
- FLOAT
- TOP UNIT
- FEEDBACK UNIT

PUMPS

- CENTRIFUGAL PUMP
- POSITIVE PUMP
- VACUUM PUMP
- LIQUID RING PUMP
- SCREW PUMP

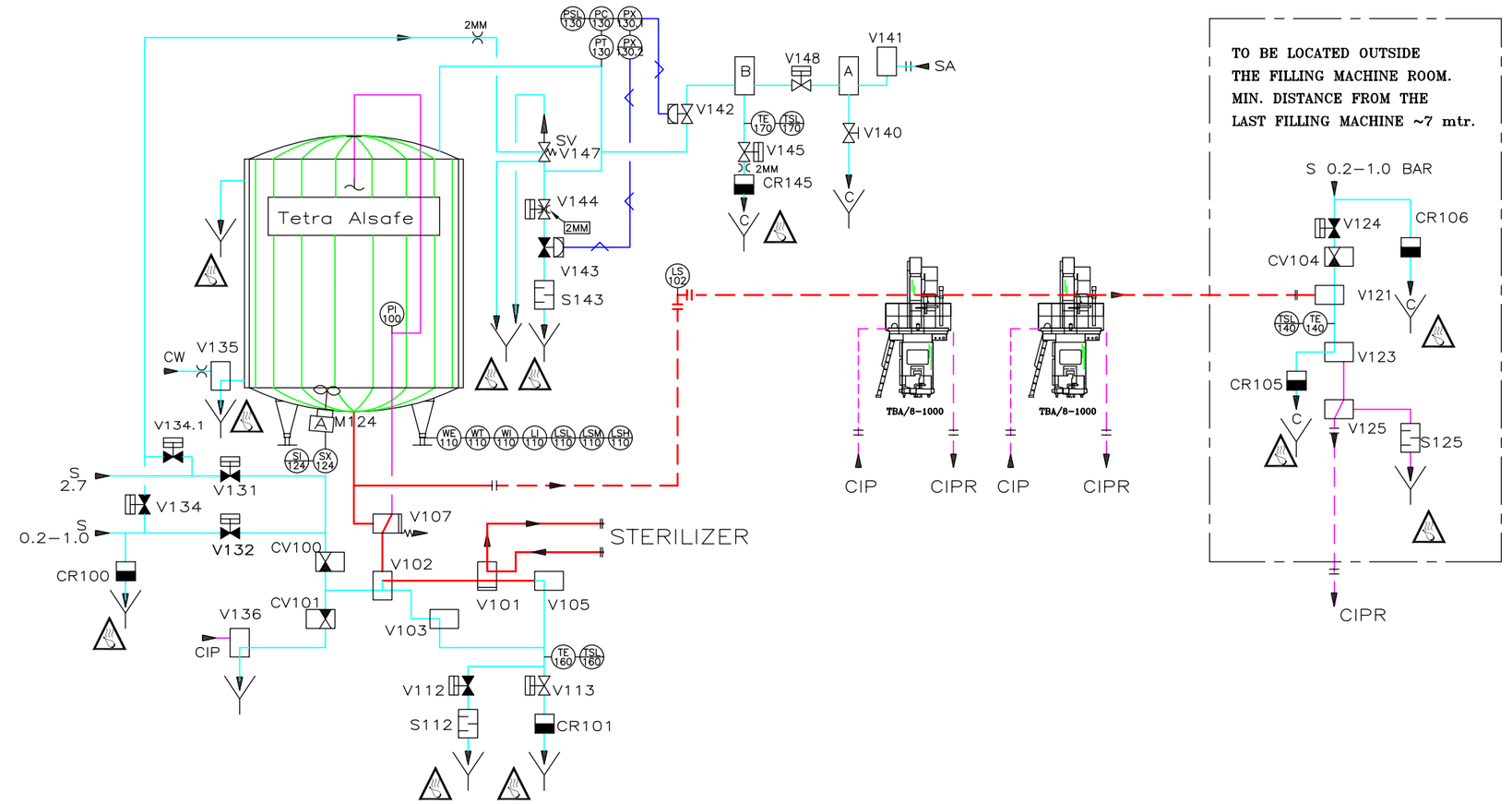
COMPONENTS

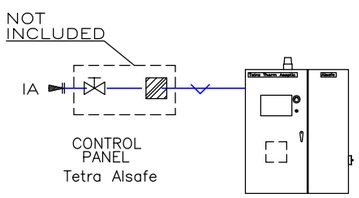
- STEAM TRAP
- FILTER, STRAINER
- SIGHT GLASS
- AGITATOR
- CLEANING DEVICE
- EJECTOR/INJECTOR
- DRAIN/FUNNEL
- EXPANSION VESSEL
- SILENCER
- PLATE HEAT EXCHANGER
- TUBULAR HEAT EXCHANGER
- STATIC MIXER

Flow Diagram Symbols

Machine No	Designer	Appr. By	Date	File Name
	MBN		2001-10-04	
Company		Format	Template	
		A2		
Tetra Pak		Scale	Document No	Revision
			Doc No 1213349-01	

Rev	Description	Designer	Appr. By	Date





V107: THREE POS. VALVE

FEED BACK ON VALVES
V101, V102, V107

— — NOT INCLUDED IN TPD&B, DELIVERY

CAUTION!
HIGH TEMPERATURE OUTLET!

K111379 Bishkeksut, Russia

Tetra Alsafe LA, 30.000 L
Flow Diagram

Machine No	Designer	Appr. By	Date	File Name
T5844610432	SW	BOO	2001-11-15	30244-0986.dwg

Company	Format	Template
Tetra Pak Dairy & Beverage Systems AB	A2	

Scale	Document No	Revision
1:1	30244-0986	