

Graphical symbols for process flow diagrams

LINES

	Line, general symbol
	Process fluid
	Flexible pipe or hose
	Insulated pipe
	Pipe with heating or cooling jacket
	Pipe with heating or cooling coil (electric, steam, water etc.)
	Cap on pipe end. Plug in pipe end.
	Union
	Throttle device
	Control line, liquid
	Control line, air
	Control line, electricity
	Cleaning, pressure line
	Cleaning, return line
	Limit of delivery

INSTRUMENTS

	Instrument, locally mounted
	Instrument, panel mounted

Actuating Quantity

(B)	Concentration
(C)	Conductivity
(D)	Density
(d)	Difference
(E)	Electric quantity
(F)	Flow rate
(G)	Position or length
(K)	Time
(L)	Level
(M)	Moisture, humidity
(P)	Pressure

(Q)	Content, concentration, quantity (in number)
(S)	Speed, frequency
(T)	Temperature
(V)	Viscosity
(W)	Weight, force
(X)	Other

Type of instruments

(A)	Alarm
(C)	Controller
(I)	Indicator
(N)	Sensor
(Q)	Integrating
(R)	Recorder
(S)	Switch
(T)	Transmitter (quantity to other signal)
(X)	Converter (signal to signal)
(Z)	Emergency, safety acting

Supplement for value of quantity

(H)	Action intended obtained at high value
(M)	Action intended obtained at medium high value
(L)	Action intended obtained at low value

PUMPS

	Pump, general symbol with Varidrive
	Pump, general symbol with motor controlled Varidrive
	Pump, general symbol with frequency-modulated motor
	Pump, general symbol with thyristor-modulated voltage

	Pump, general symbol with X speed motor
	Centrifugal pump
	Positive displacement pump
	Eccentric screw pump
	Piston pump
	Diaphragm pump
	Vacuum pump
	Liquid ring pump











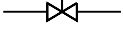
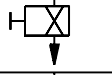

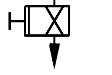
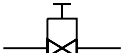

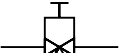
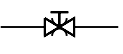
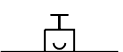

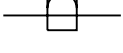
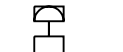





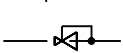
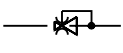
COMPONENTS

	Condensate trap, e.g. steam trap
	Filter or strainer
	Sight glass
	Agitator
	Scraper agitator
	Spray device nozzle
	Turbine
	Non foaming inlet
	Light
	Load cell
	Funnel

ACTUATORS

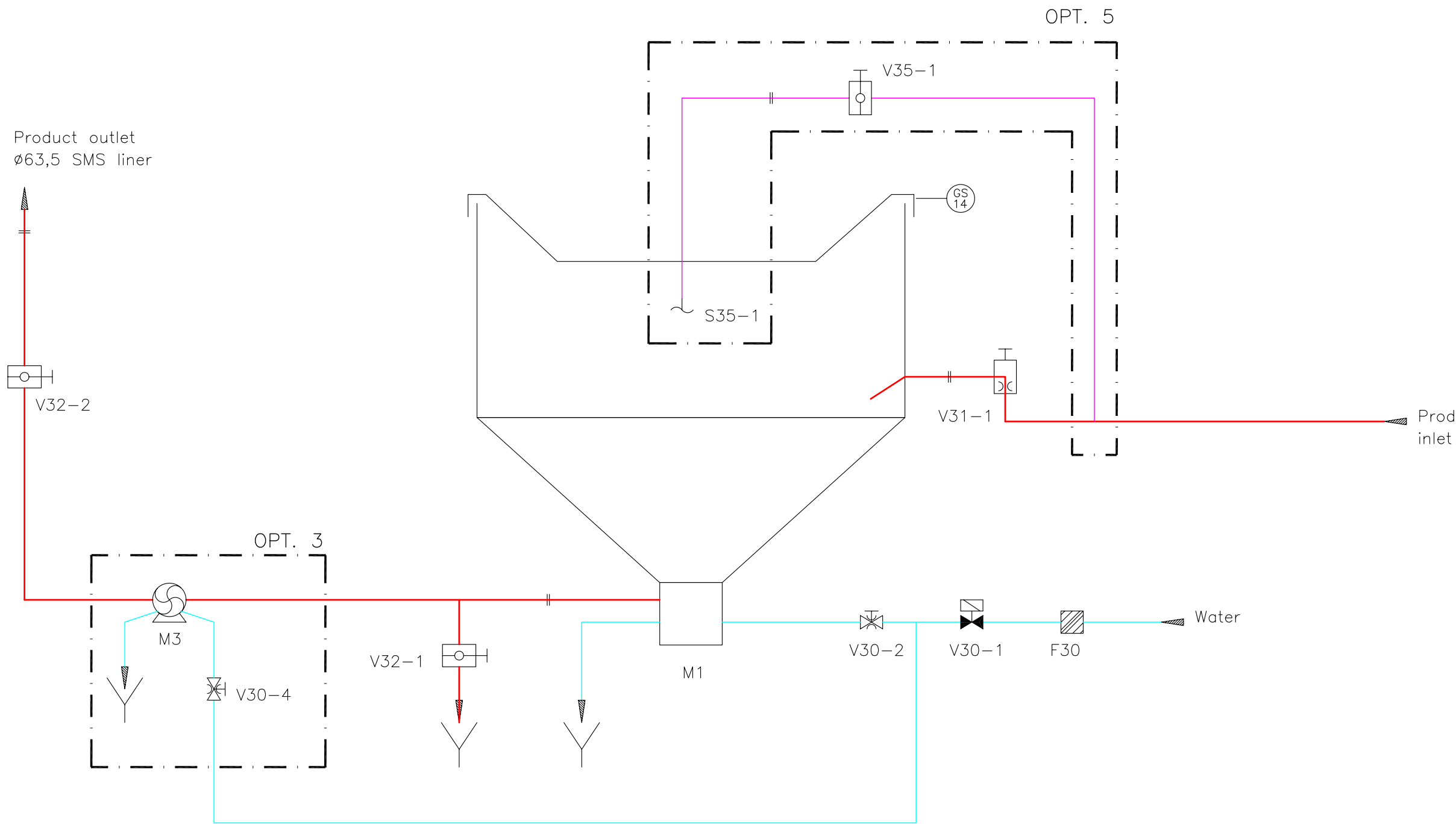
T	Hand actuator
	Membrane
	Piston
	Electric magnet
	Electric motor
	Actuator with E/P positioner
	Actuator with pneumatic positioner
	Float

Graphical symbols for process flow diagrams

VALVES			
	Valve, hygienic		Manual seat valve, hygienic, type SMO
	Valve, aseptic		Seat valve, hygienic, type SRC
	Valve, hygienic, with ALTOP		Butterfly valve, hygienic, type LKB
	Valve, hygienic, with single feedback		Constant pressure valve, hygienic, type CPM
	Valve, hygienic, with double feedback		Mix-proof valve, hygienic, type SMP
	Manual shut-off valve		Sampling cock, hygienic (manual)
	Manual change-over valve		Sampling cock, aseptic (manual)
	Manual shut-off valve, hygienic, e.g. LKLH		Air blow valve, hygienic
	Manual change-over valve, hygienic, e.g. LKTH	MEDIA	
	Manual regulating valve	W	Water
	Regulating valve, hygienic, hand actuated, e.g. type FA, SMO-R, SMO-RF	IW	Ice water
	Hygienic valve, type diaphragm valve	HW	Hot water
	Control valve, hygienic, remote actuated, e.g. type SPC	HWC	Hot water, circulation
	Pressure relief valve	S	Steam
	Vacuum relief valve	C	Condensate
	Air release valve	A	Air
	Pressure relief valve, hygienic	D	Drain
	Pressure regulating valve	G	Gas
	Flow regulating valve	CW	Cooling water, chilled water
	Non-return valve	DW	Demineralized water
	Non-return valve, hygienic	FW	Fresh water
		SW	Softened water
		TW	Tower water
		IA	Instrument air
		SA	Sanitary air

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Emergency stop

Electrical supply
3x380V 50 Hz

K121738, Bishketsut, Russia				
Tetra Almix L10				
Flow diagram				
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