

The **NORCHEM AnCAT® Model AL-20S** automatic liquid polymer system is designed to process up to 24 GPH of neat liquid polymer and deliver up to 20 GPM (1200 GPH) of a nominal 0.2 to 2.0% aqueous polymer solution. The AL-20S system is modular in design consisting of a liquid polymer injection module and booster module assembly.

AnCAT® MODEL AL-20S LIQUID POLYMER SYSTEM SPECIFICATIONS:

FRAME:	BASE:	36" W x 28" L x 55" H (42" w/OPTIONAL BOLT LUGS)
	CONSTRUCTION:	CARBON STEEL, DRYLAC SERIES 49 POWDER COATING
PANEL:	ENCLOSURE:	NEMA 12
INJECTION MODULE:	PUMP:	ROTARY-GEAR-TYPE, 316 STAINLESS STEEL
	DRIVE:	POSITIVE TORQUE TRANSMISSION, 4:1 GEAR REDUCED
	MOTOR:	½ HP, 1725 RPM, TENV, WASHDOWN DUTY
	CAPACITY:	NEAT POLYMER FLOWRATE: 4 TO 24 GPH (96 TO 576 GPD)
BOOSTER MODULE:	PUMP:	CENTRIFUGAL-TYPE, STAINLESS STEEL, CHEMICAL SERVICE
	DRIVE:	CLOSE-COUPLED, DIRECT
	MOTOR:	2 HP, 3450 RPM, TEFC, WASHDOWN DUTY
	DISCHARGE:	4 TO 30 GPM, 15 – 20 PSI BOOST TO INLET WATER PRESSURE
SOLUTION OUTPUT:	PRIMARY FLOW:	4.0 TO 20 GPM (240 TO 1200 GPH)
	SECONDARY FLOW:	NONE
	TOTAL FLOW:	4.0 TO 20 GPM (240 TO 1200 GPH)
CONCENTRATION:	SOLUTION:	PRIMARY: 0.2 TO 2.0%, VOLUME ON VOLUME
		TOTAL: 0.2 TO 2.0%, VOLUME ON VOLUME
CONTROLS:	CONTROLLER:	MANUAL MECHANICAL, MICROMETER DIAL ADJUSTMENT
	WATER:	LOW WATER FLOW ALARM AND FAILSAFE, MANUAL RESET
	POLYMER:	LOW POLYMER FLOW ALARM AND FAILSAFE, MANUAL RESET
	LIQUID LEVEL:	CONDUCTIVITY-TYPE, 4 STAINLESS STEEL PROBE ASSEMBLY
UTILITIES:	ELECTRICAL:	460 VAC, 3 PHASE, 60 HERTZ, 15 AMP
	WATER:	20 GPM @ 50 PSI, CLEAN SOURCE

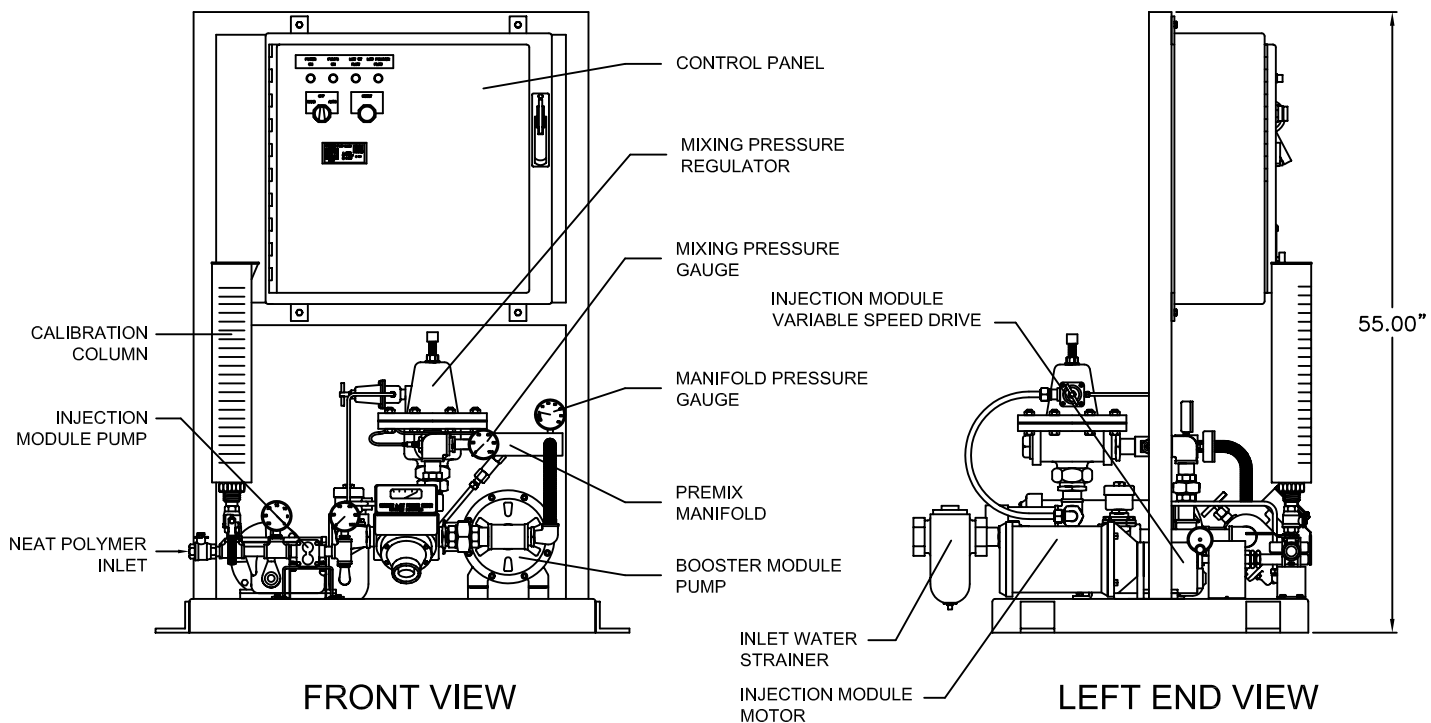
ENGINEERING SPECIFICATIONS:

The **AnCAT® Model AL-20S** shall be provided to rapidly dilute, activate and feed emulsion, dispersion, and solution polymers at 20 GPM of polymer solution at concentrations to 2%. The system shall contain a four-step, controlled-energy hydraulic circuit that instantaneously dilutes and blends the polymer to its most effective state for use in the process. The unit shall be designed with full pressure-controlled, inline-inversion capability and shall not be limited by a minimum retention time restriction. The polymer system shall be capable of providing a 15 to 20 PSI pressure boost and shall not rely on available inlet water pressure to discharge the polymer solution product. The system shall be modular in design and shall consist of a polymer injection module, booster module, premix manifold, inlet water solenoid valve, primary inlet water flow meter, primary inlet water flow controller, mixing pressure regulator (adjustable to 70 PSI), hydraulic stabilizer circuit, mixing pressure gauge, manifold pressure gauge, and inlet water throttling valve.

PLAN & ELEVATION

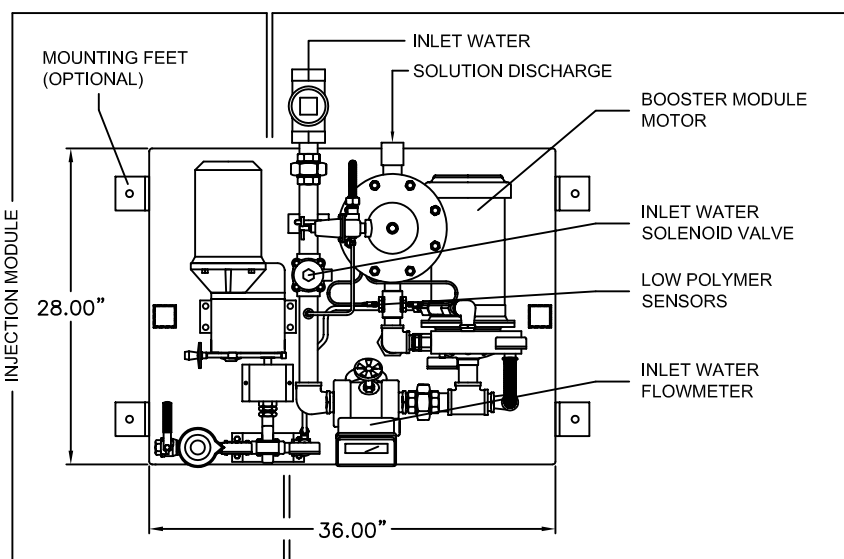
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L-SERIES AL-20S



FRONT VIEW

LEFT END VIEW



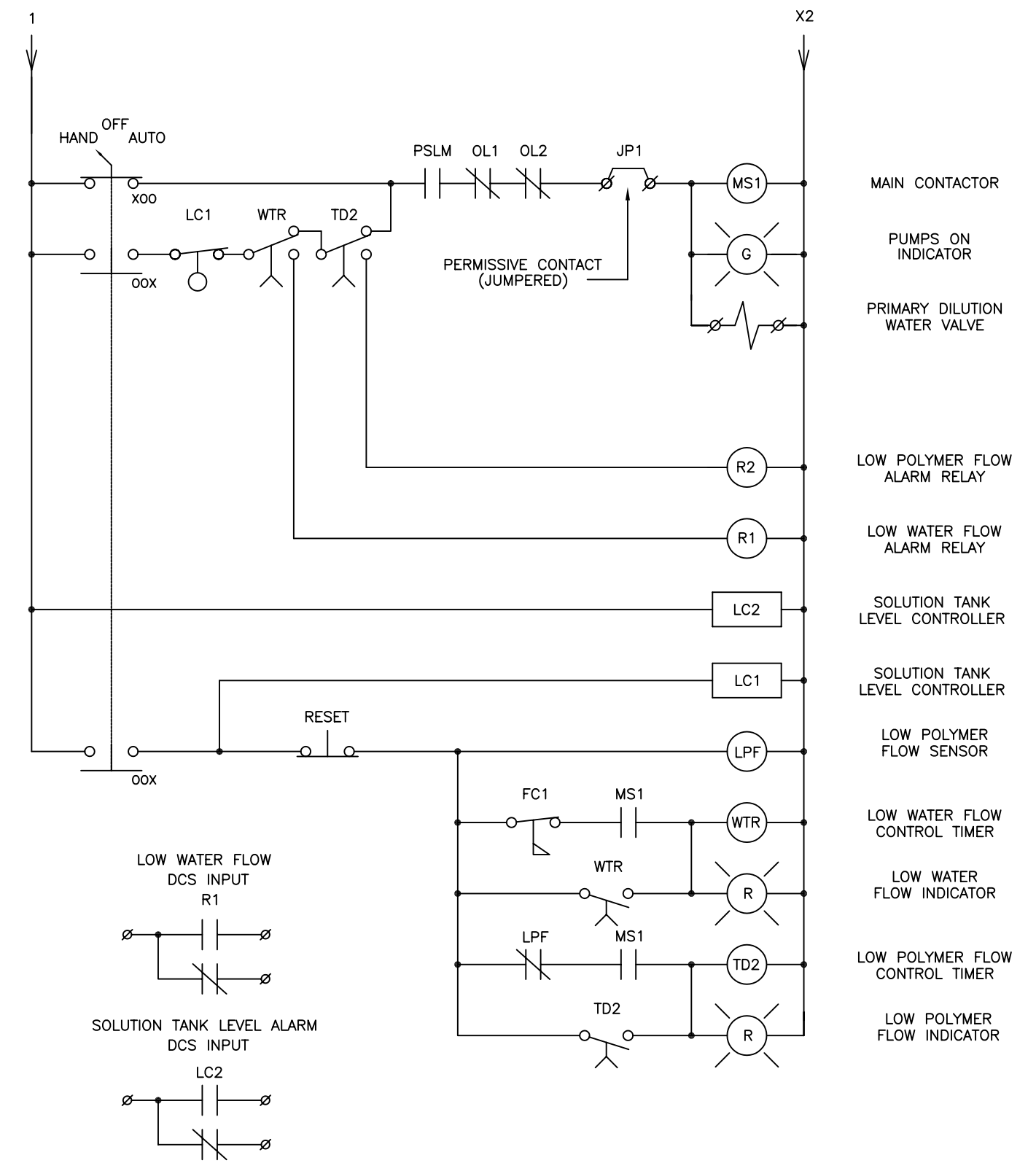
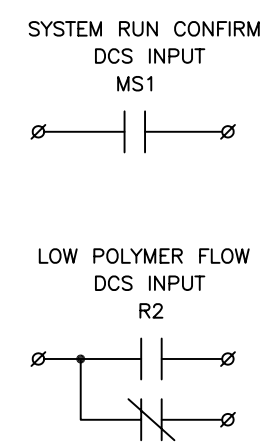
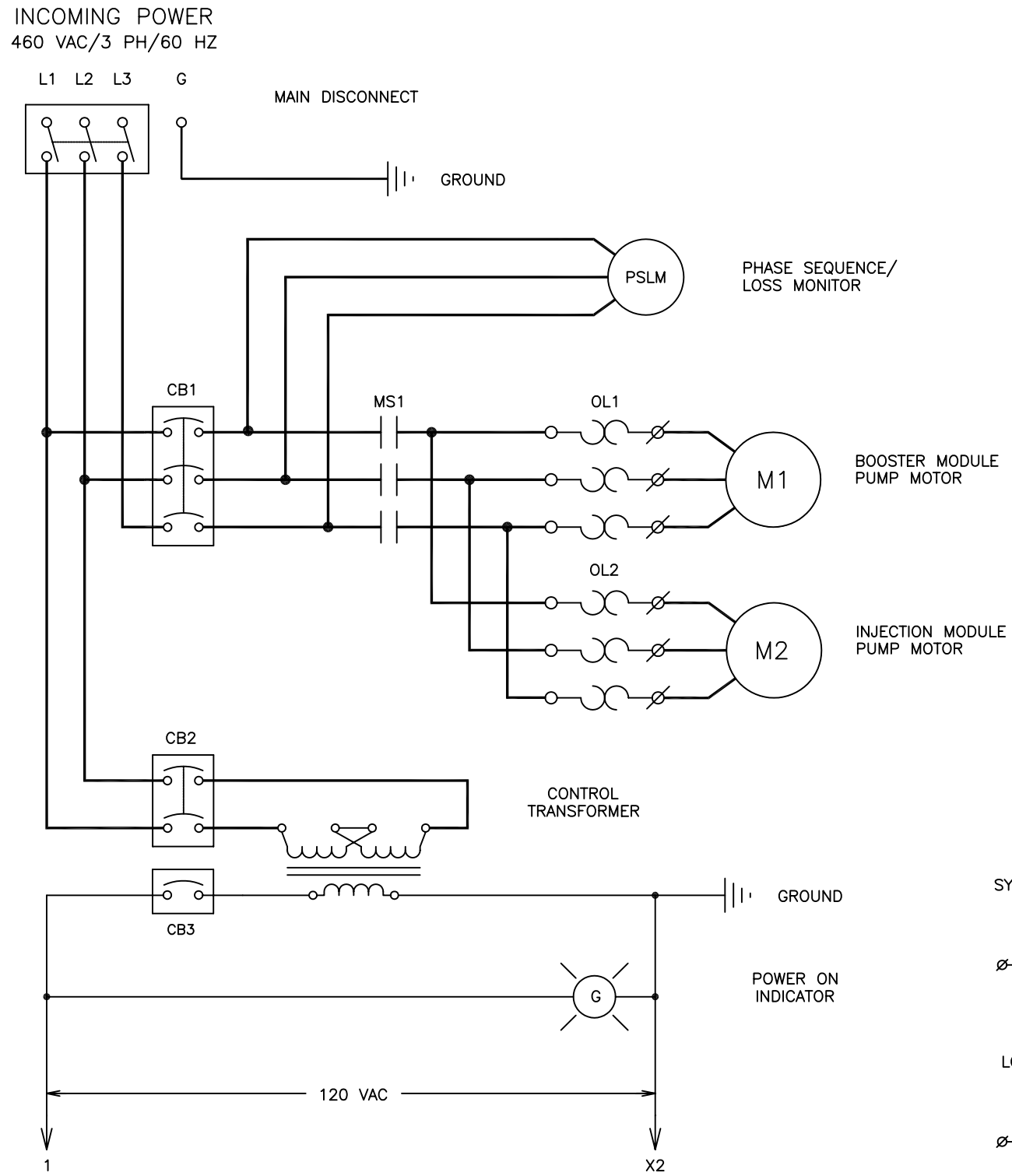
PLAN VIEW

NORCHEM INC.

ELECTRICAL SCHEMATIC

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L-SERIES AL-20S



AnCAT L-SERIES AL-20S & AL-30S

LEGEND

DEVICES

HV-1	POLYMER SUPPLY SHUTOFF HAND VALVE
HV-2	CALIBRATION ASSEMBLY ISOLATION HAND VALVE
CAL-1	CALIBRATION CYLINDER
PI-101	NEAT POLYMER POLYMER SUCTION GAUGE
PI-102	NEAT POLYMER PUMP DISCHARGE GAUGE
PI-103	MIXING PRESSURE GAUGE
PI-104	MANIFOLD PRESSURE GAUGE
M-101	BOOSTER PUMP MOTOR
M-102	POLYMER INJECTION PUMP MOTOR
SOV-101	DILUTION WATER INLET SOLENOID VALVE
CV-101	MIXING PRESSURE CONTROL VALVE
FEI-101	DILUTION WATER INDICATING FLOW METER w/VALVE

CONTROLS

SS-101	SELECTOR SWITCH "HAND-OFF-AUTO"
PB-101	PUSH BUTTON "RESET"
LC-101	PRIMARY LEVEL CONTROLLER
LC-102	SECONDARY LEVEL CONTROLLER
LPF-101	LOW POLYMER FLOW CONTROLLER

INDICATORS

PWR-101	"POWER ON" INDICATOR
PMP-101	"PUMPS ON" INDICATOR
LWA-101	"LOW WATER FLOW" INDICATOR
LPA-101	"LOW POLYMER FLOW" INDICATOR

OUTPUTS

R101	COMMON FAULT
R102	COMMON ALARM
R103	SYSTEM POWER FAULT
R104	TANK LEVEL ALARM

