PROCESS COOLING

ENGINEERING PROCESS WATER SYSTEMS SINCE 1963

CHILLED WATER PUMP TANK STANDARD SYSTEMS

Precise, Low-Temperature Water Control, Year-Round.

20-130	238-1,615	96-624	8
NOMINAL CAPACITY (TONS)	TANK VOLUME (GALLONS)	PROCESS FLOW (GPM)	STANDARD MODELS

Process Cooling Systems offers a complete line of custom engineered chilled water pump tank systems for processes that require precise, low-temperature water control throughout the year. Chillers maintain the stable water temperatures needed for mold cooling in injection molding, which supports correct part formation and helps prevent defects. High-precision plastics, complex molds, die-casting, continuous profiles, and tight-tolerance extrusions all require exact thermal regulation, and a chilled water pump tank system delivers that regulation more precisely than a standard evaporative cooling tower.

PRECISION BY DESIGN

Process Cooling Systems chilled water pump tank systems ensure a precise gallons-per-minute flow rate and consistent water pressure, meeting every process need.

STANDARD FEATURES

- Stainless steel tanks resist corrosion and are welded with structural support stands and braces for maximum structural integrity.
- Tank stub-ins set at a 45° angle reduce water vortex and maintain consistent water flow at high gallons-per-minute conditions.
- Internal tank baffle maximizes the efficiency of heat transfer during turnover of the tank water.
- Insulated chilled water piping features half-inch Armaflex insulation on all pipes, tanks, check valves, pump volutes, and pump trim.
- Chemical treatment ports support chilled water system water quality assurance.
- Chiller evaporator pumps are selected to maintain water velocity throughout the chilled water system in order to stabilize steady-state temperature.
- Process pumps are selected for predictable pressure drop through equipment while maintaining water velocity throughout the process, which supports repeatability.
- Engineered pump trim on suction, discharge, and check valve piping optimizes water flow velocity and minimizes pressure loss.
- Sight glass water level indicator is included as standard on all tank sizes.
- Pump and tank assembly ships in sections that bolt together for fast connection and installation.



BUILT FOR TIGHT TOLERANCES

- Precise temperature control maintains the stable water temperatures that mold cooling requires in injection molding, which supports correct part formation and prevents defects.
- High-precision plastics, complex molds, die-casting, continuous profiles, and tight-tolerance extrusions all depend on exact thermal regulation.
- Chilled water pump tank systems hold temperature more precisely than a standard evaporative cooling tower.
- Insulated chilled water piping features half-inch closed-cell foam insulation throughout the system.
- Internal tank baffle maximizes the efficiency of heat transfer during turnover of the tank water.

AVAILABLE OPTIONS

- High temperature and low water level alarms provide process visibility.
- Standby pump supports reliable uptime.
- Variable frequency drive is available for control of each process pump.
- Full-flow strainer with bypass piping maintains water flow and allows the strainer to be isolated and serviced while the system is running.
- Bag filter prevents heat exchanger fouling by capturing particulates, and bypass piping keeps water at its design velocity.
- Non-fused disconnect isolates the system during maintenance.

TECHNICAL DATA - CHILLED WATER PUMP TANKS (CWPT)

CHILLED WATER PUMP TANK SYSTEMS	CWPT-238	CWPT-297	CWPT-428	CWPT-700.1	CWPT-700.2	CWPT-935	CWPT-1077	CWPT-1615
SYSTEM								
Nominal Refrigeration Capacity (Tons)	20	30	40	60	70	90	110	130
Process Flow Rate (GPM)	96	144	192	288	336	432	528	624
Tank Volume (gal)	238	297	428	700	700	935	1,077	1,615
Return Piping Diameter	2"	3"	3"	4"	4"	6"	6"	6"
PUMP & TANK								
Tank Size	3.2' D x 4' H	3.2' D x 5' H	3.8' D x 5' H	4.5' D x 6' H	4.5' D x 6' H	5' x 5' x 5'	6' x 4' x 6'	6' x 6' x 6'
Evaporator Pump hp	3	5	5	5	7.5	7.5	7.5	10
Evaporator Pump Flow (GPM)[1]	48	72	96	144	168	216	264	312
Evaporator Pump Pressure (psi)	32	32	32	32	32	32	32	32
Process Pump hp	10	10	15	20	20	30	40	40
Process Pump Flow (GPM)[2]	96	144	192	288	336	432	528	624
Process Pump Pressure (psi)	71	71	71	71	71	71	71	71
Tank Stub-In, Evaporator Pump	2"	2 ½"	3"	4"	4"	4"	6"	6"
Tank Stub-In, Process Pump	3"	4"	4"	6"	6"	6"	6"	8"
Pump & Tank Overall Dimensions (in, L x W x H)	96 x 72 x 54	96 x 72 x 66	120 x 72 x 66	120 x 72 x 78	120 x 72 x 78	132 x 72 x 66	120 x 72 x 78	144 x 72 x 78
Figure	1	1	1	1	1	2	2	2
ELECTRICAL DATA (460V / 60Hz / 3ø)								
Pump Skid Panel Size (in)	36 x 36 x 12	36 x 36 x 12	42 x 36 x 12	42 x 36 x 12	42 x 36 x 12	48 x 36 x 12	48 x 36 x 12	48 x 36 x 12
MCA[3]	37	40	55	69	80	102	129	132
MOP[4]	44	47	69	80	84	122	154	157
FLC	33	36	50	62	66	92	116	119
RDE[5]	40	45	60	75	80	110	150	150

[1] Evaporator pump flow calculated at 10°F delta-T. [2] Process pump flow calculated at 5°F delta-T. [3] MCA, Minimum Circuit Ampacity, used for minimum wire size requirement. [4] MOP, Maximum Overcurrent Protection, used for sizing maximum fuse or breaker size. [5] RDE, Recommended Dual Element Fuse, for limiting fault current.

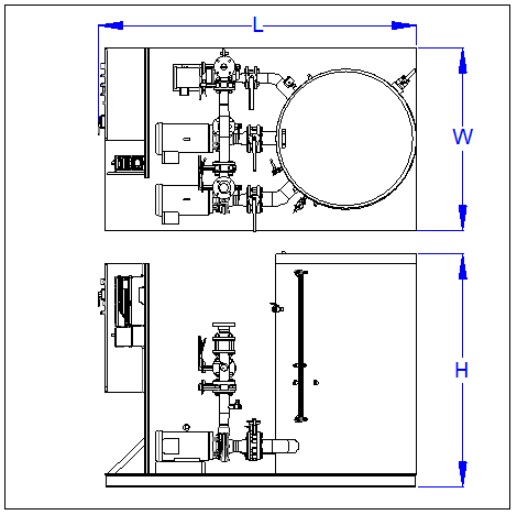


Figure 1

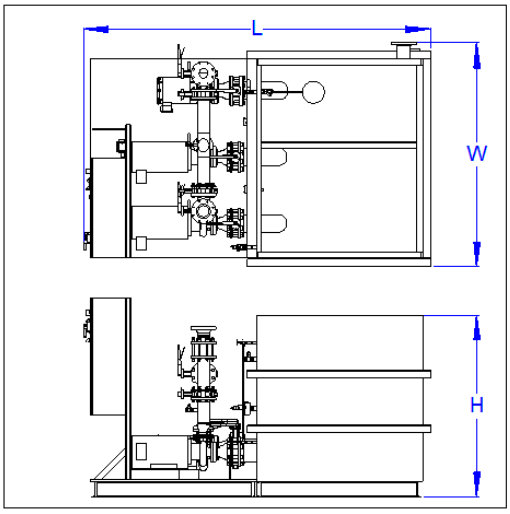


Figure 2