Ferm Chamber Parts List

Shopping list for our four-chamber fermentation build.

BrewGeeks
Sniffing airlocks since 2010

Everything we used to build four insulated chambers, cooled by water-cooled radiators fed from a chest freezer and warmed by a paint-can heater. Scale quantities to the number of chambers you build.

ONE CHAMBER (OUTSIDE)
31" H × 18" W × 19" D
78.7 × 45.7 × 48.3 cm

STAND
25.5" H × 36" W × 20" D
64.8 × 91.4 × 50.8 cm

FITS
One 6 gal (22.7 L) carboy per chamber, with room for the fan up top

	PART	QTY	NOTES	COST
Chambers				
☐	3/4" (18 mm) plywood		Box walls, top and floor	
☐	1/2" (12.7 mm) rigid foam board		Lines every inside wall	
☐	Silicone caulk	2 tubes	Seal every edge and corner	
☐	Dry erase board sheet	1 per chamber	Floor liner: spreads the carboy's weight, easy to wipe, takes notes	
☐	Hole saw kit	1	Line and wire pass-through in the back	
Stand				
☐	2x4s and 4x4 posts		Frame. Built for 20 gal (76 L) of beer plus chambers	
☐	Plywood top	1 sheet	An extra inch of depth leaves room for shims	
☐	Heavy-duty casters	4	Wide wheels so it rolls when full	
Cooling loop				
☐	Small chest freezer	1	Cold side of the loop. Bigger freezer = lower temps	
☐	Double 120 mm radiator + G1/4 barbs	1 per chamber	Velcro it to the chamber's back wall	
☐	120 mm fans with speed control	1 per chamber	Angle it to blow down around the carboy	
☐	Submersible aquarium pump + bucket	1	Our upgrade: replaces the freezer radiator and 12V pumps	
☐	12V water-cooling pumps + power adapter	2 + 1	Original build: one pump at each end of the loop	
☐	Triple 120 mm radiator	1	Original build: sits in the freezer	
☐	Water-cooling reservoir	1	Fill the loop with distilled water. A silver coil stops algae	
☐	1/2" thick-wall vinyl tubing	~50 ft	Includes a 20 ft (6 m) coil in the freezer	
☐	1/2" barbed tees and shutoff valves		Shut off chambers you're not using	
☐	Foam pipe insulation		Wrap every water line	
☐	Heavy-duty Velcro strips	3 per chamber	Holds each radiator in place	
Heating				
☐	Pint paint can	1 per chamber	Shields the bulb. Drill the lid with the hole saw	
☐	Porcelain lamp holder + wingnuts	1 per chamber	Mounts through the can lid	
☐	Incandescent bulb (40 W)	1 per chamber	Warms a chamber quickly	
Monitoring and control				
☐	Wireless thermometer with probes	1 base + probes	Reads the beer and the chamber air	
☐	16" stainless thermowell	1 per chamber	Probe goes down into the beer	
☐	Drilled rubber stoppers	1 per chamber	Drill slightly smaller than the thermowell	
☐	Dual-stage temperature controller	1 per chamber	Simple modern swap for our X-10 and code setup	
☐	USB webcams with LEDs + powered hub	Optional	Watch the krausen from your couch	
			Total	**$**

Heads up: active yeast run 4–5°F warmer than the air, so control on the thermowell probe. Seal every gap.

Free to print and share. Cheers!