PURE CYCLE 100

Closed-loop water recycling system



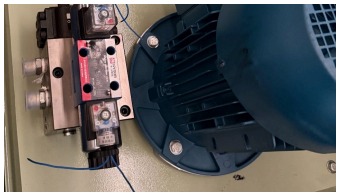
Pure Cycle 100 system

PRODUCT OVERVIEW

Pure Cycle 100 turns your shop's slurry back into clean process water. A 50 m² (538 ft²) stainless chamber filter press squeezes the stone solids into cakes, a 2,500-gallon tank stores the filtered water, and a 10 HP pump sends it back to your saws, CNCs and polishers.



Press in production (photo)



Hydraulic unit (actual photo)

105.7 GPM	538 ft²	2 microns	2,500 gal
Filtered water, nominal (24 m³/h)	Filter area (50 m²)	Filtration (manufacturer-stated)	Clean-water storage (9,464 L)

KEY SPECIFICATIONS

Output	105.7 GPM nominal (24 m³/h); up to 132.1 GPM (30 m³/h)
Filtration	Down to 2 microns (manufacturer-stated)
Filter press	50 m² (538 ft²); 38 plates, 34¼ in (870 mm)
Construction	Full stainless steel, brushed; UL-certified motors
Plate handling	Automatic plate pulling; hydraulic clamping
Cake volume	197.6 gal (748 L) per cycle; 1⅛ in (30 mm) cakes
Delivery pump	10 HP (7.5 kW); 66.0 GPM at 328 ft listed
Slurry pump	Air-operated diaphragm, up to 132 GPM
Electrical	240 V, 3-phase, 60 Hz; 22 A FLA; 32 A breaker
Connections	ASME B16.5 Class 150 flanges; NPT threads

WHY IT'S CALLED 100

The 50 m² press filters about 106 GPM (24 m³/h), up to 132 GPM at peak. The tank stores that water and the 66 GPM delivery pump feeds your machines; whatever the shop doesn't use overflows back to the pit and is filtered again.

IDEAL APPLICATIONS

- Granite, quartz, porcelain and marble fabrication shops.
- CNC saws, bridge saws, sawjets, routers and polishers.
- Shops replacing settling pits or open-water recycling.
- Larger shops: Next Level's sizing example is about 69 GPM of machine demand.

INCLUDED CONFIGURATION

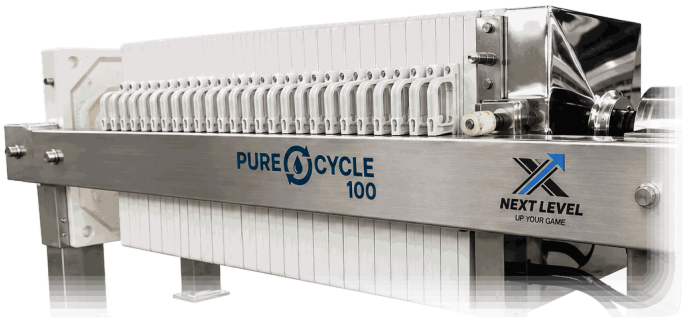
- 50 m² stainless chamber filter press with automatic plate pulling, plates and cloths.
- Air-operated diaphragm slurry pump, mounted at the press.
- 201 gal (760 L) precoat / flocculant tank with agitator.
- 10 HP multistage clean-water delivery pump.
- PLC control cabinet (built for 208–240 V) and hydraulic power unit.
- Two stainless filter-cake hoppers on casters, side by side under the press.
- 2,500 gal storage tank, interconnection piping and connection flanges.
- One pallet of PAM flocculant; installation drawings and operations manual.

BEFORE YOU ORDER

You provide the collection pit, a level concrete foundation, 240 V three-phase power, compressed air (about 32 CFM for the slurry pump) and final hookups. We confirm pit size, tank position and service clearances on your site plan.

BUILT IN STAINLESS STEEL.

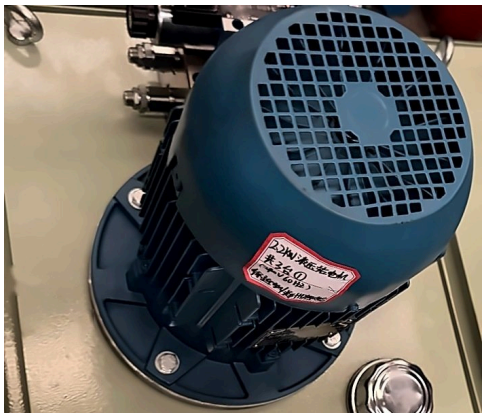
Brushed stainless steel, polypropylene plates, UL-certified motors and U.S.-standard connections.



Full stainless-steel press

Frame, stands, beams, hoppers and drip tray are stainless steel with a brushed finish. When a cycle ends, the cylinder retracts and the automatic plate puller opens the pack plate by plate, so the cakes drop into the hoppers.





Stainless cake hoppers on casters.

Actual photo of one of the first Pure Cycle 100's two hoppers, October 2026. The two hoppers sit side by side under the press, catch the cakes when the plates open, and roll out on casters to empty; each has a drain valve.

UL-certified motors.

Actual photo: the 2.2 kW (3 HP) hydraulic-unit motor. Every motor (hydraulic unit, plate puller, delivery pump and agitator) is UL-certified, and connections are ASME B16.5 Class 150 flanges and NPT threads, so U.S. fittings fit.

YOU PROVIDE

- Collection pit: design, permits and construction (minimum 6 × 6 × 6 ft for Pure Cycle 100).
- Level concrete foundation, unloading and placement of the equipment.
- Three-phase 60 Hz power by a licensed electrician, plus clean, dry compressed air.
- Shop distribution and return piping, unless ordered from Next Level.

OPTIONS & SUPPORT

- Elevated tank platform, hot-dip galvanized, 8 ft 2 in × 8 ft 2 in (2,500 × 2,500 mm); its rated load for your full tank is confirmed in writing before order.
- Shop water piping, quoted from your measured layout.
- Trench systems supplied; trench installation not included (installer referral on request).
- Installation, warranty and service scope are stated in your written quotation.

ONE CLOSED LOOP.

From your collection pit back to your machines.



Precoat tank, slurry pump, filter press with controls, storage tank and delivery pump. Component pictures are representative; your layout follows your site plan.

COLLECT. FILTER. STORE. RETURN.

The same water goes around again and again; only the solids leave, as dry filter cakes.

Collect

Shop slurry drains to your collection pit.

Feed

The air-operated pump feeds the press.

Filter

Plates and cloths hold the stone solids.

Store

Filtered water fills the 2,500 gal tank.

Return

The delivery pump supplies your machines; overflow goes back to the pit.

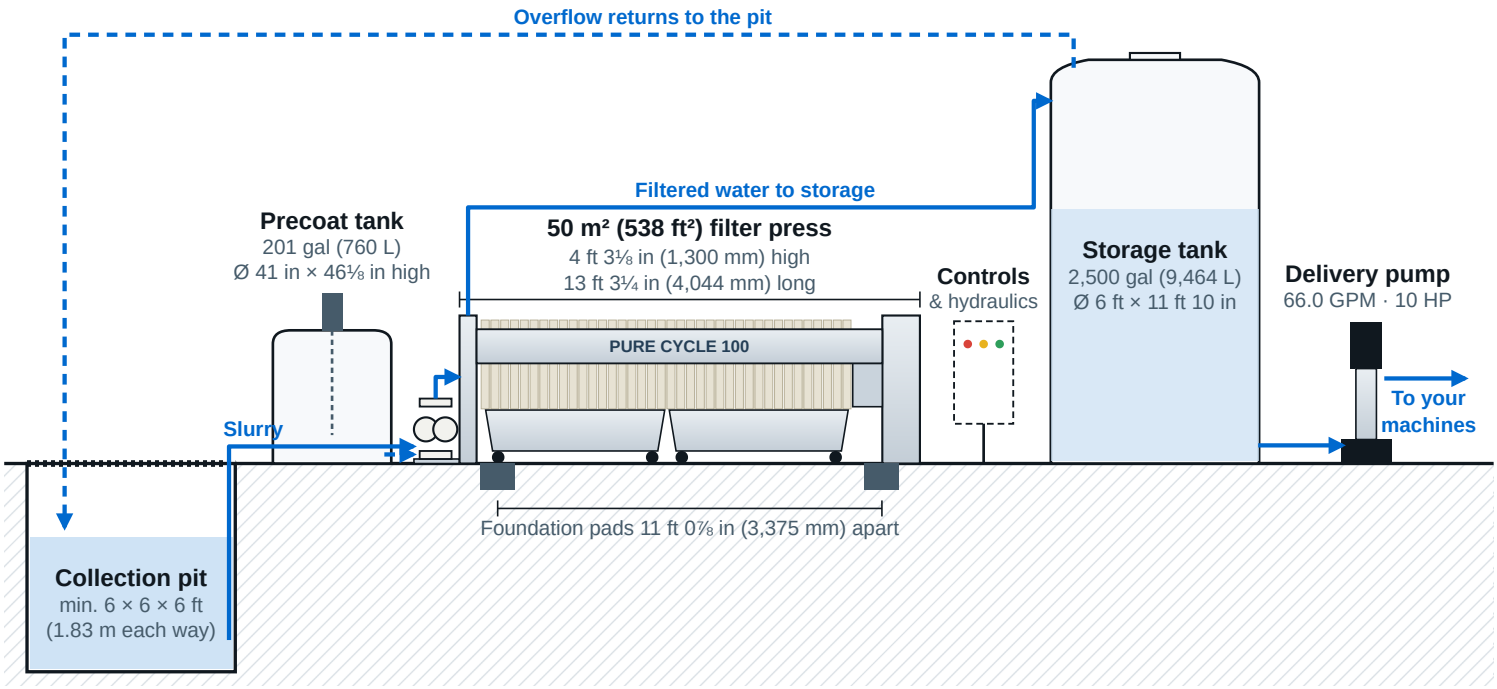
PURE CYCLE 50 OR PURE CYCLE 100?

	Pure Cycle 50	Pure Cycle 100
Filter press	30 m² (323 ft²)	**50 m² (538 ft²)**
Filtered water, nominal	52.8 GPM (12 m³/h)	**105.7 GPM (24 m³/h)**
Press maximum	66.0 GPM (15 m³/h)	**132.1 GPM (30 m³/h)**
Plates	37 × 24.8 in (630 mm)	**38 × 34¼ in (870 mm)**
Cake volume per cycle	119.4 gal (452 L)	**197.6 gal (748 L)**
Storage tank	2,000 gal (7,571 L)	**2,500 gal (9,464 L)**
Delivery pump (listed)	44.0 GPM at 315 ft · 5.4 HP	**66.0 GPM at 328 ft · 10 HP**
Press size (L × W)	12 ft 5¼ in × 2 ft 11⅜ in	**13 ft 3¼ in × 4 ft 5⅛ in**
Next Level sizing example	≈35 GPM of machine demand	**≈69 GPM of machine demand**

Sizing examples are Next Level estimates: Pure Cycle 50 for one CNC saw, an inline polisher, a hand router and three hand polishers; Pure Cycle 100 for two CNC saws, an inline polisher, a CNC router, a hand router and five hand polishers. Your layout is sized on your site review.

LAYOUT AND FOOTPRINT.

Indicative side view, drawn to scale from the equipment sizes. Your layout is drawn from your site plan.



EQUIPMENT SIZES

Filter press	13 ft 3¼ in × 4 ft 5⅛ in, 4 ft 3⅛ in high (4,044 × 1,350 × 1,300 mm)
Press weight, full	8,944 lb (4,057 kg)
Foundation pads	2 pads, 47¼ × 11¾ in (1,200 × 300 mm), 11 ft 0⅞ in (3,375 mm) apart, with 9⅞ × 9⅞ × ⅝ in (250 × 250 × 16 mm) embedded plates
Storage tank	72 in Ø × 142 in (1,829 × 3,606 mm); water when full ≈20,800 lb (9.5 t)

EQUIPMENT SIZES (CONT.)

Precoat tank	41 in Ø × 46⅛ in (1,040 × 1,170 mm)
Delivery pump	17⅜ × 14⅝ × 49 in (440 × 370 × 1,245 mm); 778 lb (353 kg)
Slurry pump	13⅜ × 9 × 22½ in (340 × 230 × 570 mm)
Collection pit	Minimum 6 × 6 × 6 ft (216 ft³ ≈ 1,616 gal; 1.83 m each way)
Controls & hydraulics	Split cabinet and hydraulic unit at the press; sizes on the final drawing

Press length, width and foundation pads from the installation drawing; height and weight from the quotation. Clearances for plate pulling, hopper removal and service are confirmed on your final layout. This is not a construction drawing.

TECHNICAL SPECIFICATIONS

Pure Cycle 100 · complete technical data (U.S. / metric)

FILTER PRESS

Filter area	538.2 ft² (50 m²)
Plates	38 movable, 34¼ × 34¼ in (870 × 870 mm), virgin polypropylene
Filter cloths	38 + 1 set, polypropylene
Cake volume	197.6 gal (748 L) per cycle
Cake thickness	1⅛ in (30 mm)
Filtered water	105.7 GPM (24 m³/h) nominal; 132.1 GPM (30 m³/h) max.
Feed pressure	Up to 87 psi (0.6 MPa)
Clamping	Hydraulic, 2,611–3,191 psi (18–22 MPa), automatic pressure holding
Pressure limit	Below 3,626 psi (25 MPa); restarts below 2,611 psi (18 MPa)
Hydraulic cylinder	Φ 7.09 in (180 mm), single cylinder
Plate handling	Automatic plate pulling
Air blow-down	Valve-switched compressed-air connection, 2 in (DN50)
Operating temp.	Below 158 °F (70 °C)

BUILD & CONNECTIONS

Construction	Full stainless steel, brushed finish
Motors	UL-certified (all motors)
Controls	PLC control cabinet; split hydraulic power unit
Flanges / threads	ASME B16.5 Class 150 RF flanges; NPT threads
Feed inlet	3 in (DN80) Class 150 RF flange
Filtrate outlets	2 in (DN50) Class 150 RF, four concealed corners
Hoppers	2, stainless, on casters, side by side under the press

ELECTRICAL

Supply	240 V, 3-phase, 4-wire, 60 Hz
Full-load current	22 A
Main breaker	32 A
Cabinet voltage	Built for 208, 220, 230 or 240 V
Motors	Hydraulic 3 HP (2.2 kW); plate pulling 1 HP (0.75 kW); delivery pump 10 HP (7.5 kW); agitator ¾ HP (0.55 kW)

SLURRY PUMP

Type	Air-operated double diaphragm; PP body; PTFE diaphragms, balls, seats
Connection	2½ in (DN65)
Flow	Up to 132 GPM (30 m³/h)
Head / suction lift	Up to 276 ft (84 m) / 16.4 ft (5 m)
Air use	31.8 CFM (0.9 m³/min)
Max. solids	0.31 in (8 mm)

DELIVERY PUMP

Type	Vertical multistage, 22 stages, 304 stainless impellers
Listed flow / head	66.0 GPM at 328 ft (15 m³/h at 100 m)
Motor	10 HP (7.5 kW), IE3
Connections	2 in (DN50)

TANKS & PRESS SIZE

Precoat tank	201 gal (760 L); 41 in Ø × 46⅛ in; 88 rpm agitator; 1⅝ in (40 mm) ports
Storage tank	2,500 gal (9,464 L); about 72 in Ø × 142 in
Press size	13 ft 3¼ in × 4 ft 5⅛ in × 4 ft 3⅛ in (4,044 × 1,350 × 1,300 mm)
Press weight	8,944 lb (4,057 kg) at full load

Questions, or ready for a written quotation? **+1 941-900-3018** · **sales@nextlevel.plus** · **nextlevel.plus**

Factory data for the press, pumps and tanks; U.S. values are converted and rounded. Pump flows and heads are listed ratings, not a guaranteed duty point; filtered-water output depends on your slurry, flocculant dosing and cleaning cycle. Final electrical values are on the equipment nameplates.