

▼ EPCO AUSTRALIA

CIRCULAR CLARIFIER
SYSTEMS



▼ **Over 330 installations in 3 continents**



- ▼ With over 60 years of design and commissioning expertise, you can be assured that your EPCO Australia clarifier will perform consistently with a long service life.

EPCO clarifiers have been in operation since the late 1960's, in municipal water and wastewater treatment plants, industrial and mining applications.

Design Configurations

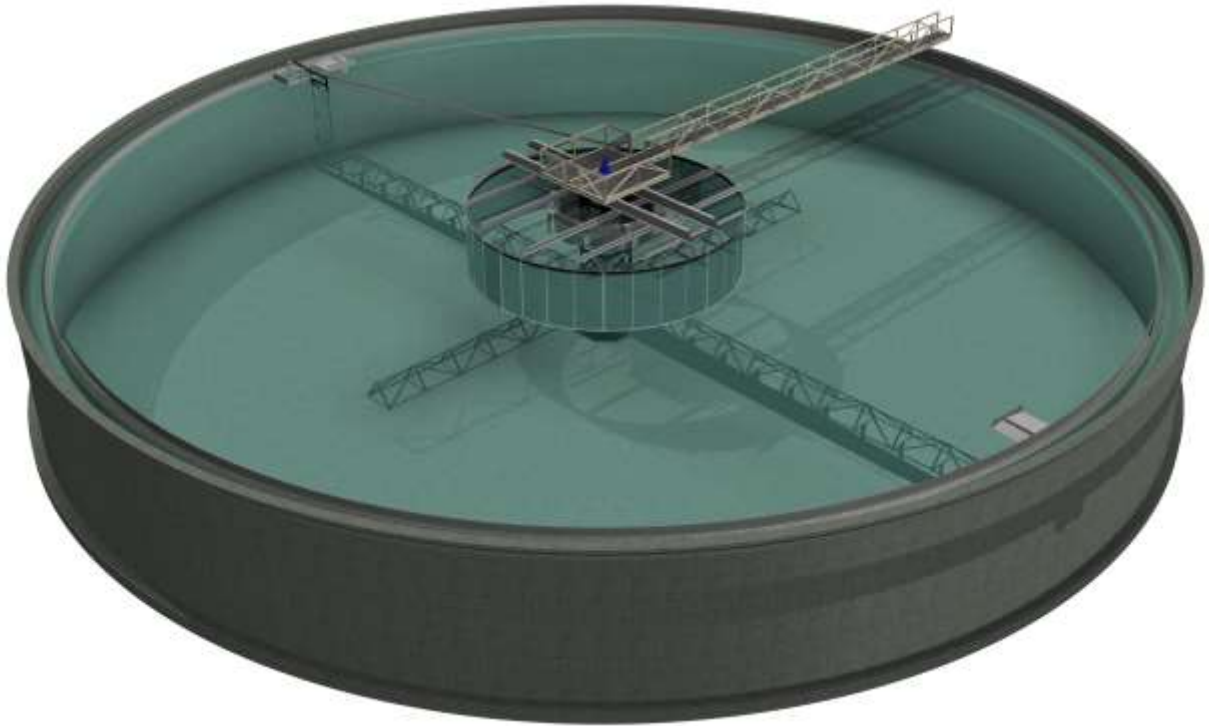
- ▼ The EPCO Australia clarifier range includes the following configurations:
- Full and half bridge fixed
 - Full and half bridge peripheral drive
 - Log spiral scraper mechanisms
 - Chevron type fixed scrapers
 - Suction headers



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Key Features



- ▼ Robust construction with heavy duty design
- ▼ Extensive design expertise with over 330 installations in 3 continents
- ▼ Minimises denitrification flotation
- ▼ No scouring of sludge blanket
- ▼ Proven drive arrangement, for both centre drive and peripheral designs
- ▼ Reliable heavy duty scraper designs for all mechanical scraper and suction systems
- ▼ Self cleaning centre well design that promotes flocculation

45M Diameter Rotating Bridge Clarifier



Applications

▼ Municipal Sewage Treatment

- Primary clarification
- Secondary clarification
- Tertiary clarification

▼ Municipal Water Treatment

- River water clarification
- Backwash water recovery
- Sludge thickening
- Lime softening

▼ Seawater Desalination

- Backwash water recovery
- Lime softening

▼ Industrial and Mining

- Primary solids and precipitate removal
- Secondary clarification
- Tertiary clarification
- Raw water clarification



References

▼ Mt St John STP, Australia

- 3 x 45M Clarifiers
- Secondary clarification
- 1 x 16M Picket Fence Clarifier
- Lime Clarifier



▼ Landers Chute WTP, Australia

- 1 x 9M Clarifier
- Potable water treatment
- Lime softening



▼ ACC Beef, Australia

- 1 x 15M Suction Head Clarifier
- Secondary clarification industrial

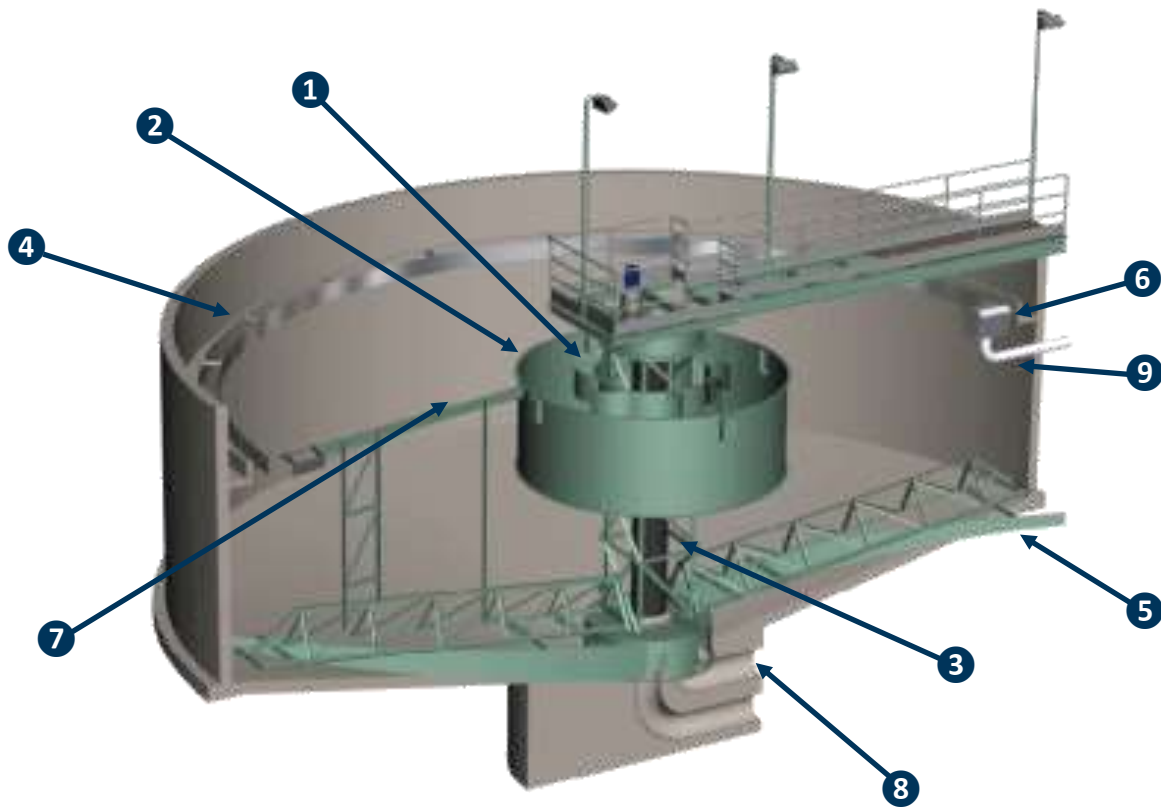
▼ Subiaco STP, Australia

- 4 x 20M Secondary Clarifiers
- Secondary clarification with full covers

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System components



1 EDI

Energy dissipation inlet, to reduce the turbulence of incoming wastewater

2 Flocculation Well

Promotes flocculation and diverts sludge to the bottom of the clarifier

3 Centre Column

Central support of structure and inlet flow to clarifier

4 Peripheral Launder

Capturing of clarified effluent for discharge

5 Sludge Removal

Options include suction header and sludge scraper

6 Scum Box

Collection point of scum from the surface

7 Scum Scraper

Rotating blade on the surface to harvest scum

8 Sludge Outlet

Discharge point of settled sludge

9 Scum Discharge

Scum discharge point from underside of scum box

Optional Features

Scum Boxes

For collecting surface scum, the design varies with tank size and wind direction.

Launder Covers

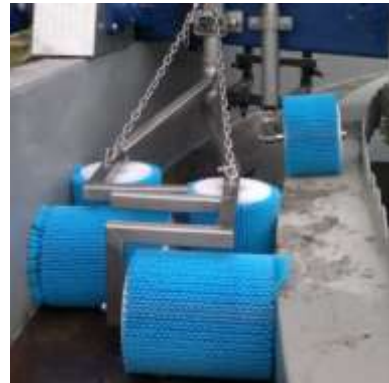
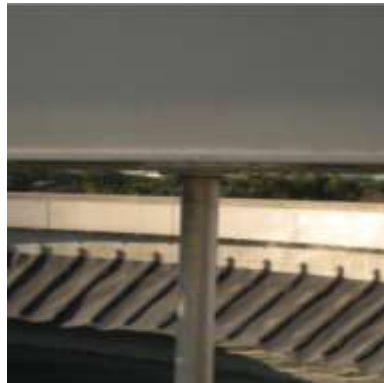
Eliminate light in effluent launders to reduce algal growth. Hinged with latches to prevent lifting.

Stamford Baffles

For eliminating density current flows that disturb regular flocculant settlement. Prevents sludge from rising up into the effluent trough.

Clean Sweep Launder Cleaning System

For removal of algae from the effluent trough, the brush system trails the rotating bridge and constantly brushes the through walls.



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Build Specification

- ▶ In general the EPCO Australia clarifiers are fabricated with wetted parts from stainless steel, and the bridge and general fabrication steel work above water line in grade 250 mild steel epoxy coated.

The following table summarises the major components and their most common material selection. Variations on the material specifications can be made, please consult Hydroflux for further detail.



SECTION	SPECIFICATION
Centre Column	Rolled painted mild steel
Bridge	Painted mild steel
EDI	Stainless structure with hinged doors
Centre Well	Stainless structure with HDPE sheeting
Scraper System	Stainless steel 304/316
Squeeges	Neoprene
Scum Box	Stainless steel 304/316
V-Notch weirs and baffles	Stainless steel 304/316
Launder Covers	Fibreglass, Aluminium or Stainless steel
Wheels	UHMWPE with or without metal hubs

Refurbishment

▶ EPCO Australia has undertaken numerous refurbishment projects, whereby existing clarifiers have been overhauled with new components as follows:

- New centre columns
- New flocculation wells and EDI
- Replacement scraper systems
- WHS compliance upgrades, with movement detectors and fall arrestors



“Hydroflux can provide new clarifier internals and refurbish existing systems regardless of the clarifier tank design and geometry”

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