



The Reactivator® is a high rate, solids contact, sludge recirculation type clarifier that uses a minimal amount of chemicals to produce an effluent of the highest quality. It is used principally for clarification, lime softening or silica reduction of water and wastewaters containing suspended solids, color and organic impurities. As such, it provides a means for chemical addition and mixing, flocculation, and upflow clarification in a single unit.

## Advantages of the Reactivator®

- Rapid chemical reactions and efficient chemical usage
- Intimate and prolonged contact with previously formed solids
- Positive, uniform recirculation of solids independent of flow
- Extremely effective sludge removal in high TSS/ turbidity water
- Deep Clear Water Zone (8-10 ft) to ensure consistent settling velocity
- Uses entire clarifier surface area for settling and collection of dense precipitates resulting in highly concentrated slurry
- Simple to operate, proven time-tested technology
- Hundreds of installations around the world, references readily available in many industrial markets

## Standard Design Features

- Short retention time/ smaller footprint
- Radial pipe effluent collectors
- Access bridge with walkway
- Above grade influent pipe
- Variable speed recirculator drive
- Efficient, high-capacity impeller
- High torque, constant speed scraper drive

## Optional Add-On Equipment

- Chemical feed equipment
- External sludge thickener
- Sludge pumps and filter press
- Gravity or pressure filters for effluent polishing
- Fume control cover
- "Smart" state-of-the-art control system

## Optional Design Features

- Floc barrier tube settlers for increased throughput
- Scum baffle & oil skimmer designs
- Circular stairway or ladder access to drive platform
- Scraper drive torque overload protection device
- Concrete shell design
- Above-grade false bottom design (on smaller units)
- Field erection of shell and internals
- Automatic chemical feed & desludging controls
- Alternate materials of construction and coatings

## Typical Applications

- Clarification
- Softening
- Silica removal
- Phosphate removal
- Color and organics removal
- Trace metal removal
- Boiler make up pretreatment
- Potable water treatment
- Wastewater treatment and recycle
- Whitewater clarification
- Reverse Osmosis pretreatment
- Demineralizer pretreatment
- Cooling tower makeup & blowdown
- Cooling tower side-stream treatment
- Recycle/reuse of grey water

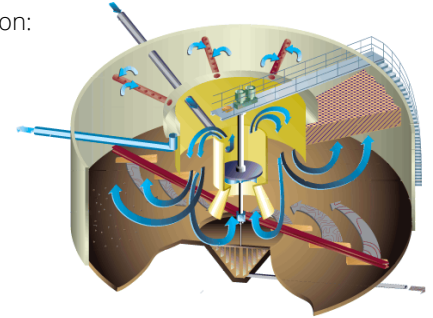
# Reactivator® Clarifier



## How it Works

The design features of the Reactivator provide the three zones necessary for proper clarification:

- Rapid mix zone, where raw water, recirculated precipitates and chemical reagents are flash mixed together.
- Slow mix zone, where gentle mixing permits floc formation, brings the flow into intimate contact with the suspended impurities, and provides sufficient time for chemical reactions to go to completion.
- Clarification or settling zone, where the upward flow (rise rate) is reduced to a low value to permit the precipitates to settle out.



## Specifications

Diam. (ft)	Nominal Capacity (gpm)	Straight Height (ft)	Detention Time (min)	Nozzle Sizes				Steel Shell Weight est. (lbs)	Internals Weight Est. (lbs)	Oper. Weight est. (1000 lbs)
				In (in)	Out (in)	Blow-down (in)	Back-flush (in)			
10	70	13	105	3	3	2	1-1/2	6,500	4,000	69
12	100	13	101	3	4	2	1-1/2	6,900	4,500	96
14	130	13	105	3	4	2	1-1/2	7,300	5,000	128
16	170	13	105	4	6	2	1-1/2	7,700	5,500	164
18	220	13	103	4	6	2	1-1/2	8,700	6,000	205
20	270	13	104	6	6	2	1-1/2	9,600	6,800	252
22	320	13	106	6	6	2	1-1/2	10,600	7,500	303
24	380	13	106	6	8	2	1-1/2	11,500	8,100	358
26	450	13	105	6	8	2	1-1/2	12,500	8,900	419
28	520	13	106	6	8	2	1-1/2	13,500	10,200	485
30	600	13	105	8	8	2-1/2	1-1/2	14,400	11,000	554
32	680	13	106	8	10	2-1/2	1-1/2	15,400	12,300	630
34	770	13	105	8	10	2-1/2	1-1/2	16,300	13,100	709
36	860	13	106	8	10	3	2	17,300	13,900	793
38	960	13	105	10	10	3	2	18,200	16,400	883
40	1,070	13	105	10	12	3	2	19,200	18,200	978
42	1,180	13	105	10	12	4	2-1/2	20,200	18,800	1,076
44	1,290	13	105	10	12	4	2-1/2	21,100	19,200	1,178
46	1,410	13	105	10	14	4	2-1/2	22,100	21,600	1,288
48	1,540	13	105	12	14	4	2-1/2	23,000	22,500	1,400
50	1,670	13	105	12	14	4	2-1/2	24,000	23,600	1,517
52	1,800	13	105	12	14	4	2-1/2	24,900	25,000	1,639
54	1,950	13	105	12	16	4	2-1/2	25,900	27,900	1,768
56	2,090	13	105	12	16	6	3	26,900	29,500	1,900
58	2,240	13	105	14	16	6	3	27,800	31,000	2,036
60	2,400	13	105	14	16	6	3	28,800	32,600	2,178
70	3,270	15	123	16	20	6	4	38,700	44,000	3,443
80	4,270	17	140	18	24	6	4	50,100	52,900	5,119
90	5,400	19	158	20	24	8	4	63,000	68,400	7,273
100	6,670	21	176	24	30	8	4	77,400	86,500	9,961
110	8,070	21	176	24	30	10	6	85,100	97,900	12,037
120	9,610	21	175	30	36	10	6	92,900	116,000	14,316
130	11,280	21	175	30	36	12	8	100,600	136,000	16,793
140	13,080	21	175	30	42	12	8	108,300	156,000	19,466
150	15,010	21	176	*	*	*	*	116,100	178,000	22,337
200+	*	*	*	*	*	*	*	*	*	*

Notes:

\* Call Factory    \*\* Minimum

Weights do not include concrete bottoms

## Contact Us

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