

Hydrocyclones

Parameter / Location		Unit	Option 5	Option 5	Option 5	Option 5	Option 5	Option 5	Option 5	Option 5	Option 5	Option 5
			LTDP1	LTDP2P	S14a1	S24b2	S2-5-1	LTDP1	LTDP2P	S14a1	S24b2	S2-5-1
			CDP	CDP	CDP	CDP	CDP	CFP	CFP	CFP	CFP	CFP
Design Flow rate		BPD	14,023	17,341	24,650	22,707	20,242	15,462	22,103	32,557	36,692	32,135
Material of Construction (MoC)			CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining	CS + 3 mm CA + internal lining
Direct Cost												
Material cost			799,760	908,447	1,121,877	1,067,950	996,798	848,037	1,050,814	1,325,690	1,424,289	1,315,353
Piping Bulks	50.0%	% of material cost	399,880	454,224	560,939	533,975	498,399	424,018	525,407	662,845	712,144	657,676
Instrumentation Bulks	40.0%	% of material cost	319,904	363,379	448,751	427,180	398,719	339,215	420,326	530,276	569,716	526,141
Electrical Bulks	20.0%	% of material cost	159,952	181,689	224,375	213,590	199,360	169,607	210,163	265,138	284,858	263,071
Structural Bulks	0.0%	% of material cost	-	-	-	-	-	-	-	-	-	-
Others	10.0%	% of material cost	79,976	90,845	112,188	106,795	99,680	84,804	105,081	132,569	142,429	131,535
2 years operational spares	2.0%	% of material cost	15,995	18,169	22,438	21,359	19,936	16,961	21,016	26,514	28,486	26,307
Installation Cost	30.0%	% of material cost	239,928	272,534	336,563	320,385	299,040	254,411	315,244	397,707	427,287	394,606
Construction Cost	20.0%	% of material cost	159,952	181,689	224,375	213,590	199,360	169,607	210,163	265,138	284,858	263,071
Commissioning Assistance Cost	2.0%	% of material cost	15,995	18,169	22,438	21,359	19,936	16,961	21,016	26,514	28,486	26,307
Direct Cost			2,191,343	2,489,146	3,073,944	2,926,184	2,731,228	2,323,621	2,879,231	3,632,390	3,902,552	3,604,067
Contractor Indirects												
Detailed Engineering, including Construction Engg.	10.0%	% of Direct Cost	219,134	248,915	307,394	292,618	273,123	232,362	287,923	363,239	390,255	360,407
Freight Cost	7.0%	% of Material Cost	55,983	63,591	78,531	74,757	69,776	59,363	73,557	92,798	99,700	92,075
TPIA / Vendor Representative Cost	2.0%	% of Material Cost	15,995	18,169	22,438	21,359	19,936	16,961	21,016	26,514	28,486	26,307
Construction Supervision & Project Management	10.0%	% of Direct Cost	219,134	248,915	307,394	292,618	273,123	232,362	287,923	363,239	390,255	360,407
Total Contractor Indirect Cost			510,247	579,589	715,758	681,352	635,957	541,047	670,420	845,790	908,696	839,195
EPC Costs			2,701,590	3,068,735	3,789,702	3,607,537	3,367,185	2,864,668	3,549,651	4,478,180	4,811,248	4,443,262
Client Indirects												
Studies + FEED	2.5%	% of EPC Costs	67,540	76,718	94,743	90,188	84,180	71,617	88,741	111,954	120,281	111,082
PMC + PMT	7.0%	% of EPC Costs	189,111	214,811	265,279	252,528	235,703	200,527	248,476	313,473	336,787	311,028
Project Insurance & Other Overheads	1.0%	% of EPC Costs	27,016	30,687	37,897	36,075	33,672	28,647	35,497	44,782	48,112	44,433
Total Client Indirect Cost			283,667	322,217	397,919	378,791	353,554	300,790	372,713	470,209	505,181	466,542
Base Estimate			2,985,257	3,390,952	4,187,621	3,986,328	3,720,739	3,165,458	3,922,364	4,948,389	5,316,429	4,909,804
Contingency	10.0%	% of Base Estimate	298,526	339,095	418,762	398,633	372,074	316,546	392,236	494,839	531,643	490,980
Total Installed Cost		USD	3,283,783	3,730,047	4,606,383	4,384,961	4,092,813	3,482,004	4,314,601	5,443,228	5,848,072	5,400,785

Source: Vendor offer from Inhouse database

Parameter		
Capacity	BWPD	40000
Base equipment cost including bulks without indexation	USD	1500000
Cost index	2022	209
Cost index	2022	209
Equipment cost including bulks with indexation	USD	1500000