

		TURBINE TYPE				
		KOURIS CENTRI TURBINE (KCT)	OTHER GVWP SYSTEMS	ARCHIMEDES SCREW	FRANCIS	KAPLAN
TURBINE PERFORMANCE	LOW HEAD SUITABILITY (<1M)	YES	NO	YES	NO	NO
	TURBINE EFFICIENCY AT LOW HEAD (<1M)	UP TO 85% ¹	30-45%	UP TO HIGH 80'S %	< 30%	< 30%
	MINIMUM HEAD REQUIRED FOR TURBINE EFFICIENCY	0.6 M	1.5 M	1 M	8 M	2 M
	MINIMUM FLOW FOR TURBINE PERFORMANCE	< 100 LPS	1200 LPS	100 LPS	350 LPS	1000 LPS
	MINIMUM TURBINE SIZE	0.5 KW	15 KW	0.5 KW	20 KW	20 KW
	PICO MODEL AVAILABILITY	YES, AS SMALL AS 5W	NO	NO	NO	NO
	MICRO-GRID, OFF GRID, NET METERING	YES, CAN GENERATE IN DC	YES, CAN GENERATE IN DC	YES, CAN GENERATE IN DC	NO	NO
	PATENTED DESIGN	ORIGINAL INVENTOR USING GRAVITATION VORTEX FOR HYDRO GENERATION, GLOBAL-FIRST PATENT PRIORITY USA 1996	LIMITED	NO	NO	NO
	VORTEX	TRUE CIRCULAR	SEMICIRCULAR SPIRAL	NOT APPLICABLE	VORTICES INTERFER WITH PERFORMANCE	VORTICES INTERFER WITH PERFORMANCE

ENVIRONMENTAL IMPACT	FISH FRIENDLY	YES	YES	YES	NO	NO
	RELOCATABLE	YES	NO	NO	NO	NO
	EXPANDABILITY	YES, EASY TO ADD MORE TURBINES IN SERIES OR IN PARALLEL	EXPENSIVE TO EXPAND	EXPENSIVE TO EXPAND	EXPENSIVE TO EXPAND	EXPENSIVE TO EXPAND
	REQUIREMENT FOR OVERFLOW PROTECTION	NO, SELF REGULATING FLOW	YES	NEEDS SPILLWAY	NEEDS SPILLWAY	NEEDS SPILLWAY
	WATER QUALITY	NATURAL FLOW, AERATED	NATURAL FLOW, AERATED	NATURAL FLOW	HIGH PRESSURE	HIGH PRESSURE
	SMALL FOOT PRINT	YES	YES	MINIMUM	NO	NO
	POTENTIAL FOR LOCAL MANUFACTURING	YES, EVEN IN DEVELOPING COUNTRIES	CAN NOT BE VERIFIED	CAN NOT BE VERIFIED	EQUIPMENT NORMALLY MANUFACTURED IN CHINA, INDIA OR BRAZIL	EQUIPMENT NORMALLY MANUFACTURED IN CHINA, INDIA OR BRAZIL

KEY FEATURES	POTENTIAL FOR USE AT INDUSTRIAL DISCHARGE	YES, IT CAN BE ADAPTED	NO	NO	NO	NO
	EASY TO RELOCATE	YES	NO	NO	NO	NO
	TRANSPORTATION OF ASSEMBLED TURBINE	YES	MULTIPLE PARTS	MULTIPLE PARTS	MULTIPLE PARTS	MULTIPLE PARTS

CAPITAL WORKS	CIVIL WORKS REQUIRED	CONCRETE PAD & PIPE PLASTIC/STEEL TANK ²	COMPLEX CONCRETE SPIRAL BASIN, INTAKE & OUTLET	CONCRETE STRUCTURE REQUIRED	COMPLEX CONCRETE SPIRAL BASIN, INTAKE & OUTLET	COMPLEX CONCRETE SPIRAL BASIN, INTAKE & OUTLET
	CIVIL WORKS	LOW	AVERAGE	AVERAGE	HIGH	HIGH
	CIVIL COST	EXTREMELY LOW	MEDIUM	MEDIUM	EXTREMELY HIGH	EXTREMELY HIGH
	INSTALLATION EXPERIENCE	NOT REQUIRED	MEDIUM	MEDIUM	HIGH	HIGH
	CONSTRUCTION TIME	< 1 MONTH	2-4 MONTHS	2-4 MONTHS	YEARS	YEARS

OPERATION	MAINTENANCE	MINIMAL	AVERAGE	AVERAGE	AVERAGE	AVERAGE
	LIFE BEFORE OVERHAUL	20 YEARS	UNDETERMINED	UNDETERMINED	50 YEARS	50 YEARS
	AVAILABILITY	100% (ONLY WON'T WORK WITH COMPLETE DROUGHT)	40-80 HOURS PER YEAR OUTAGE FOR MAINTENANCE	40-80 HOURS PER YEAR OUTAGE FOR MAINTENANCE	40-80 HOURS PER YEAR OUTAGE FOR MAINTENANCE	40-80 HOURS PER YEAR OUTAGE FOR MAINTENANCE

1 BASED ON ACTUAL FIELD INSTALLED KCT TURBINE RESULTS

2 PLASTIC OR STEEL TANK SUPPLIED WITH KCT UNIT