JADHGANGA HE PROJECT (2 x 25=50 MW)
SALIENT FEATURES

LOCATION

State	Uttaranchal
District	Uttarkashi
River	Jadhganga
Dam site	
Location	100 m D/S of confluence of Gartang gad with Jadhganga river
Latitude	31^0 02'18" N
Longitude	78^0 53'17" E
Nearest Airport	Dehradun
Nearest rail head	Rishikesh

HYDROLOGY

Catchment area at dam site	1679 sq km
Maximum average discharge at dam site	145 cumec
Minimum average discharge at dam site	10.7 cumec
Snow bound catchment area (including area under Glacial cover)	977.0 sq km
Average annual runoff	1607.76 M cum
Average monsoon runoff	1289.20 M cum
Average non-monsoon runoff	318.56 M cum

RESERVOIR

Full Reservoir Level (FRL)	El 2802.5 m
Maximum Water Level (MWL)	El 2802.5 m
Minimum Drawdown level (MDDL)	El 2785.5 m
Gross storage at FRL	2.28 M cum
Live storage	1.10 M cum
Area under submergence at FRL	8.35 ha

DIVERSION TUNNEL

Number	1
Size	5.0 mϕ
Length	400 m
Diversion discharge (assumed)	80 cumec

DAM

Type	Concrete gravity dam
Top elevation of dam	El 2805 m
Height of dam above river bed level	45 m
Length of dam at top	110m
River bed level	El 2760 m

SPILLWAY

Design flood	6450 cumec
Type	Ogee
Crest elevation	El 2775 m
Number of bays	3
Size of radial gates	14m x 13.25 m
Length of spillway	54 m
Energy dissipation	Stilling basin

INTAKE

Invert level	El 2777 m
Number	1
Size of gate opening	3.8 m x 3.8 m
Trash rack	5 of 10 m x 5.5 m
Length of intake tunnel	100 m
Shape of tunnel	D-shaped

DESILTING CHAMBER

Number	1
Size	10m x 17m
Length	220 m
Design discharge	47 cumec
Particle size to be removed	0.2 mm and above
Flushing discharge	8 cumec
Flushing Tunnel Size	2 mϕ
Flushing Tunnel Length	180 m

HEAD RACE TUNNEL

Number	1
Size	3.8 m
Shape	Horse shoe
Length	1.1 km
Design discharge	39.0 cumec

SURGE SHAFT

Number	1
Type	Simple Surge Shaft
Size	8 m ϕ
Height	76 m

PRESSURE SHAFT

Numbers	1 (Bifurcated into 2 of 2 m ϕ)
Size	3.2 mϕ
Length	210 m

POWER HOUSE

Type	Underground
Installed capacity	50 MW
Number of units	2
Power house cavern size(main)	59 m x20.5mx 30 m
Type of turbine	Vertical axis Francis turbine
C.L. of turbine	El 2641 m
Rated Head	142.57 m

TAIL RACE

Size	4 mϕ
Type	D-shaped
Length	290 m
Design Discharge	39.0 Cumec
Maximum TWL	2649 m
Minimum TWL	2647 m

SWITCHYARD

Size	Gas Insulated Switchyard (GIS) on the floor above the transformer/s in P/H cavern

POWER GENERATION

Installed capacity	50MW (2x25 MW)
Annual energy generation	
i) 90% dependable year	220.88 GWh
ii) Energy in 90% year on 95% availability	210.50 GWh

CONSTRUCTION PERIOD	**5 years**