DECCAN®

a EKKI Group brand

Installation & Operation Manual

DOUBLE STAGE JET PUMP
WITHOUT CONTROL VALVE

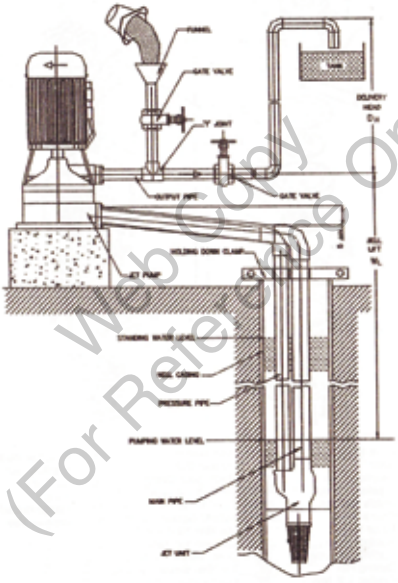
BRIEF DESCRIPTION OF THE DECCAN JET PUMP

The Jet Pump consists of monobloc and a jet unit which operate in combination to pump water from deep wells. Water is forced under pressure through a nozzle and a venture. The water surrounding the nozzle area is trapped along with the high speed stream and in this wway water is pumped out. Therefore two pipes are required to be inserted into the well. One for injecting water into the jet and the another one for bringing the water out of the jet.

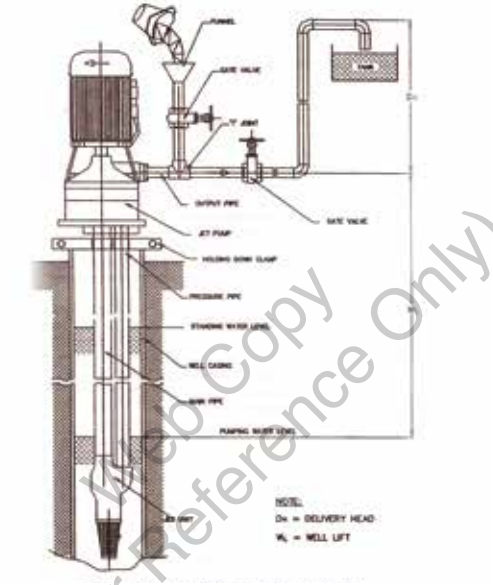
CHECKS TO BE MADE BEFORE INSTALLATION

1) The diameter of the bore well should be checked before lowering the jet unit and pipes into the bore well. This check will ensure that the jet unit does not get stuck in the bore at any point. The check is carried out using a disc whose diameter is equal to the maximum diameter of the jet unit.
2) Measurements are also to be made of the following quantities :
   a) Depth of the well from ground level.
   b) Yield of borewell. This is a measure of the maximum amount of water that can continuously be drawn from the well while maintaining a stable water level. Borewell operators can measure the quantity by a compressor test.
   c) Lowest water level in summer. The water level will go down and therefore this should be taken into account.

Web Copy
(For Reference Only)



INSTALLATION OF JET PUMP (HORIZONTAL)



INSTALLATION OF JET PUMP (VERTICAL)

INSTALLATION

1) The Jet monobloc should be installed in a clean, dry location with proper ventilation. Do not install in open air without sufficient covering.
2) The Monobloc can be installed either over a well or away from it. The Pipe leading from the Monobloc to the well must slope down from the Monobloc to the well.
3) Only new pipes and fittings are to be used. Old pipes contain lose scale and dirt. This will block the nozzle and put the pump out of order.
4) The Jet unit should be located around 3 metres (10 ft) below the lowest water level in the well.
5) Equipment required (refer the list of materials)
6) The foot valve is to be checked by filling it with water and allowing the water to stand for 30 minutes; if the foot valve is faulty the water level will decrease due to leakage. The dealer is to be contacted immediately for replacement or rectification.
7) If the use of old pipes is unavoidable, the dirt and scale in them is to be removed by keeping them vertically and hitting them with a hammer.
8) At every joint threading compound is to be applied to ensure a leak-proof joint.
   Note : The Jet Pump will not function even if there is a slight leak in the suction pipe.
9) Before the installation of the last two lengths the horizontal pipe which are to be connected to the Monobloc flanges one should ensure that their ends are level. This will result in a better fit.
10) The horizontal pressure pipe is to be connected between the elbow and flange using a slope as shown in figure 1
11) A gasket is to be provided between flange and pump and the flange nuts are to be tightened well to prevent leakage.
12) For ease in priming the pump at fitting is to be connected on the delivery side as shown in figure. The T fitting should be located between the pump and gate valve.

OPERATION

1) PRIMING :

When the pump is started for the first time it is to be primed (i.e. the pump is to be filled with water). This can be accomplished using the T fitting as shown in figure. The air-cock is opened. Water is poured until there is a free flow from the air - cock. Then the air-cock is closed gradually while water is being poured. If after closing the air-cock water level in the fitting falls, this indicates there is a leak and mechanic should be consulted.

2) CAUTION :

Pumped water must not contain sand or grit. In a new borewell there will be sand, mud, grit, etc. as a result of the drilling of the borewell. While starting for the first time, the pump is not to be stopped until clear water flows ie. It must not be switched off while pumping sandy water.

LIST OF MATERIALS REQUIRED FOR JET PUMPS

Essential Items :

1) Motor - Pump unit, Jet assembly and Foot valve
2) Starter - Main switch fuse and cable
3) Main pipe and pressure pipe in GI/PVC of required size, thickness and length with couplings, bends

Alternatively

Main pipe and pressure pipe in HDP / Flexible material of required size, thickness and length with 4 nos. metallic hose collars and clips. (2 nos. for main pipe and 2 nos. for pressure pipe). 2 nos of 250 mm length GI Pipe with coupling of main pipe's size and 2 nos of 200 mm length GI pipe with coupling of pressure pipe's size.

4) 25 mm G.I. Pipe 200 mm length 4 nos.
5) 25 mm G.I.T - 1 no.
6) 25 mm Gate Valve - 2 nos
7) Clamps - 2 Pairs (1 pair for main pipe and 1 for pressure pipe)

TOOLS AND INSTRUMENTS :

1) Tripod with pulley block or equivalent equipment
2) Pipe wrenches - 2 nos
3) Cutting player, screw driver, hammer, chisel indicator and spanners
4) Thread, locking paste/PTFE tape, Emery cloth
5) Clip on meter, Multi meter, Meggar (500 V)

EKKI GROUP

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