# HYDRO JETTING APPLICATIONS

<table>
<thead>
<tr>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Exchanger Tube Cleaning Equipment</td>
</tr>
<tr>
<td>Condenser Tube Cleaning System</td>
</tr>
<tr>
<td>Evaporator Tube Cleaning System</td>
</tr>
<tr>
<td>Calandria Tube Cleaning Pump</td>
</tr>
<tr>
<td>Hydro Jetting Machine for Boiler Tube Cleaning</td>
</tr>
<tr>
<td>Industrial Tube Cleaning System</td>
</tr>
</tbody>
</table>

Before tube cleaning

After tube cleaning
We manufacture wide range of hydro jetting machines for the pressure ranging from 250 bar to 1400 bar. Please visit Quick Selection Chart of Hydro Jetting Machine.

Technical Details:

- Inlet connection (BSPF) – 2"
- Outlet Connection (BSPF) – 1/2"
- Working Fluid Temp. – 60 ºC

We rigorously subject the pumps to full load testing which include:

- Field proven design.
- Forged S.S. pump head construction with high strength.
- KB Series designed with in-built gear.
- Splash lubrication. Force feed lubrication also available on request.
- Available in 3 versions.
- Manufactured on state-of-the-art machinery.
- Available direct couple 1750 RPM drives.
- Easy Field Maintenance.

<table>
<thead>
<tr>
<th>Pump model</th>
<th>Flow (LPM)</th>
<th>Flow (GPM)</th>
<th>Pressure (Bar)</th>
<th>Pressure (PSI)</th>
<th>Motor H.P.</th>
<th>Engine H.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KB 20</td>
<td>35</td>
<td>9.2</td>
<td>500</td>
<td>7250</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>620</td>
<td>9000</td>
<td>60</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>750</td>
<td>10890</td>
<td>75</td>
<td>94</td>
</tr>
<tr>
<td>KB 22</td>
<td>45</td>
<td>11.9</td>
<td>500</td>
<td>7250</td>
<td>60</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>625</td>
<td>9000</td>
<td>75</td>
<td>94</td>
</tr>
<tr>
<td>KB 24</td>
<td>52</td>
<td>13.7</td>
<td>530</td>
<td>7700</td>
<td>75</td>
<td>94</td>
</tr>
</tbody>
</table>

Note: - All pumps are suitable for 50 Hz and 60 Hz. Gear ratio will change as per Hz.
SAFETY VALVE

Safety valve is a very important accessory. It prevents major accidents from occurring in case of problem arising out of high pressure built up in line. It is standard on all PressureJet Pumps for temporary relief of excess system pressure.

Safety Valve

- Provides over-pressure protection
- Ensures safety for operator
- Intentionally designed weak part to avoid major loss
- Pressure range up to **1400 bar - 20,000 PSI.**
- Flow rate range up to **80 LPM – 21.13 GPM.**

PRESSURE REGULATING VALVE

A pressure regulating valve is a control valve that regulates the output pressure of the pump. Regulators are used for gases and liquids, and can be an integral device with an output pressure setting, a restrictor and a sensor. These may all be in the one body, or consist of a separate pressure sensor, controller and flow valve.

Pressure Regulating Valve

- Regulates output pressure as required
- Bypasses excess water
- Pressure range up to **1400 bar - 20,000 PSI.**
- Flow rate range up to **80 LPM – 21.13 GPM.**
FOOT OPERATED VALVE

Foot operated valves are operated by foot paddle. These are mainly used in hydro jetting applications. Foot operated valve used for loading & unloading the pressure in the pump. They are designed for smooth and reliable operation of the pump.

Foot Operated Valve (FOV)
- To start-stop and control water flow using the foot of an operator. Enables him keep his hands free for in-out movement of flexible lance inside tubes.
- Very essential for Operator safety, helps avoid accidents.

HIGH PRESSURE FLEXIBLE LANCE

A high pressure flexible lance connects FOV to Nozzle. Tube or pipe cleaning Nozzle is attached to the end of the lance to clean tubes or pipes of various diameters.

High Pressure Flexible Lance
- Smooth inner core surface to minimize pressure drop
- Small diameter pipes to easily enter inside ID of tubes.
- Specially designed to withstand high pressures.
- Available in various lengths as per requirement.
- Mainly used in hydro jetting applications of pressure up to 1400 bar. Available for tube ID size up to 60 mm.

HIGH PRESSURE RIGID LANCE

In hydro jetting applications, a high pressure rigid lance provides easy and firm grip to counter back pressure at the time of in and out movement of nozzle. A nozzle is attached to the end of the lance and the size of the nozzle provides certain pressure depending on the flow rate.

High Pressure Rigid Lance
- SS construction for long life.
- Available in various lengths as per requirement.
A control panel is a flat, often vertical area where control or monitoring instruments are displayed. It has many controls like on/off button, Safety Shut-down switch, Voltage and Ampere readings etc.

Electric Control Panel

- For over and under voltage protection
- Electric control panel has important and necessary controls like hour meter, volt meter, over load protection, etc.
- Control panel comes with single phase and short circuit protection

Tube Cleaning Nozzle Options

- SS hardened nozzles, specially designed to suit high pressure
- Various nozzle sizes available to suit different applications and tube IDs ranging from min. 13 mm (1/2”) to max. pipes of 1800 mm (72”)
- Various hole patterns available for effective cleaning as per job requirement
- Conventional and Rotating – both type of nozzles available

Note: - Detailed consultation will be provided up on request.
CONVENTIONAL TUBE CLEANING NOZZLES

Conventional Tube Cleaning Nozzle

- SS hardened nozzles, designed to suit high pressure
- Various sizes available to suit different tube IDs ranging from min. 13 mm (1/2”) to max. pipes of 100 mm (4”)
- Various hole patterns available for effective cleaning
- **Note:** - Detailed consultation will be provided up on request.

ROTATING TUBE CLEANING NOZZLE

Rotating Tube Cleaning Nozzle

- Highly effective and time saving than conventional.
- StoneAge-USA make patented design.
- Various sizes available to suit different Tube IDs ranging from min. 13 mm (1/2”) to max. pipes of 1800 mm (72”).
- **Note:** - Detailed consultation will be provided on request.
Glycerin Filled Pressure Gauge, ideal for dampening the effect of pulsation and vibration. Widely demanded, it has a stainless steel case filled with glycerin to offer protection against harsh environments. It enhances the integrity and reliability of measuring system for long periods under extreme operating condition.

Note: - Available in various size as per requirement.

Pressure Gauge
- Approx. 2 times pump operating pressure
- Glycerin filled
- Easy to read dial
- With needle valve
LINE DIAGRAM OF HYDRO JETTING SYSTEM

TUBE CLEANING SCHEMATIC DIAGRAM

Optional Nozzles

Flexible Lance

Inlet For Water

Drain Valve

Flexible Pipe

MAIN SWITCH

BYPASS LINE

SUCTION LINE

HIGH PRESSURE DISCHARGE LINE

<table>
<thead>
<tr>
<th>SR NO.</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Bare pump(KDD-series)</td>
</tr>
<tr>
<td>02</td>
<td>Electric motor / Diesel engine</td>
</tr>
<tr>
<td>03</td>
<td>Base frame / Trolley</td>
</tr>
<tr>
<td>04</td>
<td>Pin bush coupling</td>
</tr>
<tr>
<td>05</td>
<td>Coupling guard</td>
</tr>
<tr>
<td>06</td>
<td>Strainer for suction</td>
</tr>
<tr>
<td>07</td>
<td>High pressure hose</td>
</tr>
<tr>
<td>08</td>
<td>Pressure regulating valve</td>
</tr>
<tr>
<td>09</td>
<td>Safety valve</td>
</tr>
<tr>
<td>10</td>
<td>Pressure guage-glycerine filled</td>
</tr>
<tr>
<td>11</td>
<td>Foot operated valve</td>
</tr>
<tr>
<td>12</td>
<td>Suction hose</td>
</tr>
<tr>
<td>13</td>
<td>Con. &amp; Rotating tube cleaning nozzle</td>
</tr>
<tr>
<td>14</td>
<td>Booster pump</td>
</tr>
<tr>
<td>15</td>
<td>Basket Type Strainer</td>
</tr>
<tr>
<td>16</td>
<td>Low pressure ball valve</td>
</tr>
<tr>
<td>17</td>
<td>Water tank</td>
</tr>
<tr>
<td>18</td>
<td>Pressure switch[low pressure cut off for suction line]</td>
</tr>
<tr>
<td>19</td>
<td>Control panel</td>
</tr>
<tr>
<td>20</td>
<td>Cable</td>
</tr>
<tr>
<td>21</td>
<td>Rigid lance</td>
</tr>
<tr>
<td>22</td>
<td>Needle valve</td>
</tr>
<tr>
<td>23</td>
<td>By pass Hose</td>
</tr>
<tr>
<td>24</td>
<td>Flexible Lance</td>
</tr>
</tbody>
</table>

NOTE:-
1. Items displayed in this "Schematic Diagram" is for reference only.
2. For scope of supply, item list as per our offer will be final.

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Our Website is fully informative, exhaustive and communicative. It is designed to provide maximum information in most precise form to help our valued customers to take a quick and right decision.

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