**XPB Slurry Pump**

**Principle**
Driven by motor, the pump body and inlet line are filled with liquid before starting the pump. With high-speed rotation, the impeller drives the liquid between the vanes to rotate together. Due to the effect of centrifugal force, the liquid is thrown to the outer edge of impeller from the impeller center with kinetic energy increased. After the liquid entering the pump shell, as the flow channel in the volute type pump shell is gradually enlarged, the liquid velocity is decreased gradually, which makes part of the kinetic energy transform into static energy, therefore the liquid with high pressure is discharged along the outlet. At the same time, the impeller center forms a certain vacuum for that the liquid is thrown out. The pressure on liquid level is higher than that of impeller center, so the liquid in suction pipe will flow into the pump under the action of pressure difference. With the constant rotation of impeller, the liquid is sucked and extruded continuously.

**Features**
The design is based on liquid-solid two-phase flow theory, and the head can reach 118 m; Reasonable design of internal structure avoids the interference of pulp impact; no congestion ensures. It can be applied in a variety of working conditions. Alloy wear-resistant material is used for impeller with large diameter and low speed. Changeable elastic body or clad lining.

**Application**
It is used for slurry delivery with strong corrosion and high concentration in metallurgical, mining, coal, power, and building materials industrial departments. This type pump can also be used for multistage-series.

**Technical Parameters**

<table>
<thead>
<tr>
<th>Size Range (Outlet)</th>
<th>Flow</th>
<th>Head</th>
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<tr>
<td>50 mm~350 mm</td>
<td>Max. 3798 m³/h</td>
<td>Max. 118 m, Average 60 m</td>
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Structure Drawing of XPB Slurry Pump

Notes:
1. Bearing assembly
2. Packing washer
3. 1 hexagon nut
4. High-strength big hexagon head bolt for steel structure
5. Hydropneumatic O rubber seal ring
6. Shaft sleeve
7. Hexagon head bolt
8. 1 hexagon nut
9. A screw oil cup
10. Oil cup base
11. Water seal ring
12. Pressure relief cap
13. Pump body
14. A double-screw bolt
15. Flat washer
16. Hexagon nut
17. Pump sheath
18. Impeller
19. Pump cover sheath
20. Pump cover
21. Front back plate
22. Pump cover wedge
23. Pump bolt
24. 1 hexagon nut
25. Hydropneumatic O rubber seal ring
26. Vice impeller
27. Packing seat
28. 1 hexagon nut
29. Packing
30. Packing gland square head bolt
31. Strip packing gland
32. Flat washer
33. 1 hexagon nut
34. Pump bolt
35. 1 hexagon nut
36. Flat washer
37. Bracket
38. High-strength big hexagon head bolt for steel structure