

**TECHNICAL SPECIFICATIONS**

**SJS - 20000 (BELT DRIVEN)**

| CRANKSHAFT SPEED<br>@475 RPM |                  |     |     | POWER INPUT                                     |        |        |        |
|------------------------------|------------------|-----|-----|---|--------|--------|--------|
| MODEL                        | PLUNGER<br>IN MM | LPM | GPM | 120 HP  | 150 HP | 175 HP | 200 HP |
|                              |                  |     |     | MAX.PRESSURE (Kg/cm <sup>2</sup> ) @ POWER (HP) |        |        |        |
| 20018                        | 18               | 40  | 11  | 1190  | 1455   | 1720   | 2000   |
| 20020                        | 20               | 49  | 13  | 965   | 1180   | 1400   | 1600   |
| 20022                        | 22               | 59  | 16  | 795   | 975    | 1150   | 1300   |
| 20024                        | 24               | 71  | 19  | 670   | 820    | 970    | 1100   |
| 20026                        | 26               | 83  | 22  | 570   | 700    | 825    | 950    |
| 20028                        | 28               | 97  | 26  | 490   | 600    | 710    | 810    |
| 20030                        | 30               | 111 | 29  | 430   | 525    | 620    | 710    |
| 20032                        | 32               | 126 | 33  | 375   | 460    | 545    | 620    |
| 20036                        | 36               | 160 | 42  | 300   | 365    | 430    | 490    |
| 20040                        | 40               | 197 | 52  | 240   | 295    | 350    | 400    |
| 20045                        | 45               | 250 | 66  | 190   | 235    | 275    | 315    |
| 20050                        | 50               | 309 | 82  | 155   | 190    | 225    | 255    |
| 20055                        | 55               | 374 | 99  | 130   | 155    | 185    | 210    |
| 20060                        | 60               | 445 | 118 | 105   | 130    | 155    | 180    |

**I. Power End:**

Manufactured from High strength grey cast Iron Power End housing, containing Induction hardened Alloy steel Crank shaft, driven by means of built in helical gears & pinion drive which is supported by cylindrical Roller Bearing at both ends. Connecting rod machined from S. G. Iron with automotive type Split insert Big & Shell

**II. Fluid End:**

Ultrasonically tested forged S.S Pump head ensures safe operation at High pressure. Stainless-Steel Spring-loaded Valve & Valve seat for positive closing & Opening are machined, heat treated & grounded. Surface finishes for longer Seal & Plunger life. Teflon/PTFE made & easily replaceable Plunger seal in the Stainless-Steel Stuffing box.

**III. Motor:**

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SEC-32, FARIDABAD -121003, HARYANA

**WORKS:** PLOT No. 78,  
VISHWAKARMA IND. AREA,  
PALI-BHAKRI ROAD, FARIDABAD-121001  
HARYANA

**E-MAIL:** STERLINGJETTING.SYSTEMS@GMAIL.COM  
VATS.SHIVAM@STERLINGJETTING.IN  
CONNECT@STERLINGJETTING.IN  
**PHONE:** 0129-2984894, +91-9818844894

1. Type -TEFC, Squirrel Cage Induction
  2. Rating- Suitable For 415 V +/- 10%, 3 Phase 50 Hz +
  3. Mounting – Foot Mounted
  4. Temperature- Ambient Temp. 40 Deg. C, Class
  5. Standard- As per IS: 325
  6. Make - KIRLOKAR/ ABB/ SIEMENS
- IV. **Electric Control Panel:** Non-F.L.P Type, Trolley mounted with standard makes fitting & accessories.
- V. **Trolley:** M.S Fabricated, Tow- able with swivel arrangement four wheels Trolley.
- VI. **Safety:** Spring-loaded High-Pressure relief valve
- VII. **Filtration Unit:** Basket Type 100 Micron
- VIII. **Booster Feed Pump:** Horizontal Centrifugal, Kirloskar Make
- IX. **Pressure Gauge:** 0 to 1000 BAR, Glycerin Filled 4” S.S Dial, ¼” BSP Bottom Connection
- X. **Oil Pump:** Dowety Make Gear Type
- XI. **Oil Cooler:** Shell & Tube Type Oil Cooler
- XII. **Coupling:** H. P. Pump & Motor Coupling Type
- XIII. **Pressure Regulating Valve:** Spring Loaded, Stepless Type 0 to 1000

| S.NO | PARTICULARS  | DESCRIPTION              |
|------|--|--------------------------|
| 1    | Manufacturer   | Sterling Jetting Systems |
| 2    | Type   | Triplex Plunger Pump     |
| 3    | Series   | SJS- 20000               |
| 4    | Pump Design Standard   | API 674                  |
| 7    | Pump Speed (Strokes Per Minute)  | 475                      |
| 9    | Volumetric Efficiency at Rated Flow Capacity                               | -10%                     |
| 17   | Pump Efficiency at Rapid Flow Capacity at Design Pressure                  | 90%                      |
| 18   | Motor Efficiency at Rated Pump Capacity at Design Pressure                 | 94.8%                    |
| 19   | Overall Efficiency at Pump with Motor (Pump $\eta$ $\times$ Motor $\eta$ ) | 95%                      |
| 22   | Size Of Suction Connection   | 4 Inches                 |

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|    |   |                                 |
|----|---|---------------------------------|
| 23 | Size Of Discharge Connection                            | 2 Inches                        |
|    | Material Of Construction (Material Standard with Grade) | SS – 304                        |
| 24 | Pump Body   | Ci                              |
| 25 | Pump Head   | Ss                              |
| 26 | Plunger   | Ceramic                         |
| 27 | Plunger Surface Treatment                               | Heated                          |
| 28 | Cross Head & Liner                                      | Ci & Ss                         |
| 29 | Connecting Rod  | Ci And Ss                       |
| 30 | Connecting Rod Bearings                                 | P. B                            |
| 31 | Crank Shaft   | Carbon Steel                    |
| 32 | Crankshaft Bearing No.                                  | Nv-2214-22316                   |
| 33 | Stuffing Box  | Ss-304                          |
| 34 | Stuffing Box Packing                                    | PTFE – Gland Type               |
| 35 | Suction Manifold  | Aluminum                        |
| 36 | Discharge Manifold                                      | S. S                            |
| 37 | Pulsation Dampener                                      | Fabricated                      |
| 38 | Suction Strainer  | S. S                            |
| 39 | Bolts, Nuts and Fasteners                               | High Tensile                    |
| 40 | Base Plate/ Frame                                       | Fabricated                      |
| 41 | Valves And Valve Seat                                   | Heat Treated – S. S             |
| 42 | Gear Box  | In-Built Gear Box Pin Bush Type |
| 43 | Type Of Lubrication                                     | Forced Lubrication              |
| 44 | Oil Specification                                       | 150 Vg 320-25 Liter             |
| 45 | Oil Pump Capacity                                       | 35 Lpm                          |
| 46 | No Of Stages, Reduction Ratio                           | Single Stage, 1:3               |
| 47 | Coupling Type   | Pin Bush                        |

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|    |                            |                           |
|----|----------------------------|---------------------------|
| 48 | Coupling Guard             | Yes                       |
| 49 | Valves And Gauges          | Dial Gauge Glycerin Field |
| 50 | Suction Strainer Mesh Size | 400 Micron                |
| 51 | Total Weight               | 3.25 T                    |
| 52 | Base Frame Plate Thickness | 10 Mm                     |
| 53 | Foundation Bolt Size       | M20                       |

**DO's**

1. Before starting the H.P. Pump, check oil level in crank case & to be maintained & changed as per O & M manual.
2. Electrical connection should be proper.
3. Electrical motor rotation should be Clockwise from Fan side.
4. All high pressure hoses & adaptors connections should be proper tightened.
5. Water suction pressure should be 2-4 BAR.
6. Water Filter should be cleaned before starting the pump.
7. Safety Valve testing to be done once in 2 to 3 months.
8. Ensure continuous flow of filtered water with 40-80 Microns Filtration level.
9. Use proper & recommended Nozzle.
10. Stop H. P. Pump immediately if there is any leakage in discharge & abnormal sound during the operation.
11. H. P. Pump operation must be as per O & M manual.
12. All Hoses / Flexible Lances should be avoided in contact with sharp corners.
13. No leakage in Suction & Discharge is acceptable during operation.
14. All Pressure / Temperature switches to be checked periodically.

**DONT's**

1. Don't start the H. P. Pump in load condition.
2. Don't wear loose clothes while attending the pump.
3. Pressure Switches should not be bypassed.
4. Damaged H. P. Hoses should not be used & to be replaced.
5. Avoid over tightening of Pressure Regulator.

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